Service Manual

ViewSonic 29GA

Model No. 2964GA-1

29" Digital Controlled Color Monitor
Graphics Series

PerfectSound™
ViewSonic®
ViewSonic 29GA
FUSE
FUSE

(Rev. 1 - July 1996)

ViewSonic® 20480 E. Business Parkway, Walnut, California 91789 USA - (800) 888-8583

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- This model complies with FDA Rules 21 CFR Subchapter J applicable at date of manufacture.
- Certified to comply with the limits for a Class A computing device pursuant to Part 15 of FCC Rules. See instructions if interference to radio reception is suspected.

IMPORTANT SAFETY NOTICE

There are special components used in the **ViewSonic 29GA and** video monitor that are important for safety. These parts are shaded on the schematic diagram and on the replacement parts list. It is essential that these critical parts be replaced **only** with the manufacturer's specified parts to prevent X-RADIATION, shock, fire or other hazards. **Do not modify the original design.**

ABBREVIATIONS USED IN THIS MANUAL

ITC	Integral Tube Component
FET	Field Effect Transistor
DY	Deflection Yoke
CY	Convergence Yoke
MOS	Metal Oxide Semiconductor
AVR	Automatic Voltage Regulator
CRT	Cathode Ray Tube
FBT	Flyback Transformer
AFC	Automatic Frequency Control
VR	Variable Resistor

Note:

- IBM, IBM PC, PC/XT, PC/AT, OS/2, Personal System/2 (PS/2), MCGA, VGA, 8514/A and XGA are registered trademarks c International Business Machines Corporation.
- Apple, Macintosh IIfx, IIx, II, IIci, IIcx, IIsi, LC, LCII and Quadra are registered trademarks of Apple Computers Inc.
- Windows is a trademark of Microsoft Corporation.
- Super VGA (SVGA) and VESA are trademarks of Video Electronics Standards Association.
- **ViewSonic is a registered trademark of ViewSonic Corporation**
- All other brands, company and product names, registered or unregistered trademarks are the properties of their respective holders.

SAFETY PRECAUTIONS

GENERAL GUIDELINE

1. Use an isolation transformer in the power line and AC supply to troubleshoot.
2. When servicing, observe the original lead dress, especially the lead dress in the high voltage circuits. If a short circuit is found, replace all parts that have been overheated or damaged by the short circuit.
3. After servicing, ensure that all the protective device such as insulation barriers, insulation papers, shields, and isolation R-C combinations are properly installed.
4. Before turning the monitor on, measure the resistance between the B+ line and chassis ground. Connect the negative (−) side of an ohmmeter to the B+ lines and the positive (+) side to chassis ground. Each line should have more resistance than the following specifications:

B+ Line	Typical Resistance
+5 V (standby)	200 Ω
+6.3 V	2 Ω
+12 V (standby)	200 Ω
+15 V	100 Ω
+32 V	7 kΩ
+125 V	15 kΩ
+160 V	∞
+175 V	15 kΩ
+260 V	80 kΩ

5. Potential as high as 29.0 kV is present when this monitor is in operation. Operation of the monitor without the rear cover involves the danger of a shock hazard from the monitor power supply. Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture tube to the monitor chassis before handling the tube.
6. After servicing, perform the leakage current checks to prevent the customer from being exposed to shock hazards.

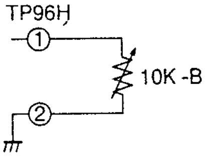
LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Turn on the monitor power switch.
3. Use an ohmmeter to measure the resistance value between the jumpered AC plug and each exposed metallic cabinet part on the monitor, such as screwheads, terminals, control shafts, handle bracket, etc. When an exposed metallic part has a return path to chassis, the reading should be more than 240 kΩ. When exposed metal does not have a return path to the chassis, the reading must be ∞.

HORIZONTAL OSC. DISABLE CIRCUIT TEST

WARNING: This test must be made as a final check before the set is returned to the customer.

1. With the rear cover removed, supply nominal 120 V AC and connect a host computer to the set.
2. Connect 10 kΩ variable resistor at the maximum value position (i.e. 10 kΩ) between TP96H #1 pin and #2 pin on High-voltage Board (H-Board).



3. Connect the High Voltage meter between CRT anode and the chassis ground.
4. Turn on the power switch and adjust the monitor controls to the normal position.
5. Supply a full screen of "H" characters from the host computer.
6. Gradually increase the High Voltage by rotating the variable resistor which is connected between TP96H #1 pin and #2 pin above.
7. Confirm that the monitor is shut down at approximately 33 kV.
8. If the test fails, the X-Ray Protector Circuit is not operating and must be repaired. Refer to the X-Ray Protector Circuit Repair Procedure.

This circuit must be operative before the set is returned to the customer.

X-RAY PROTECTOR CIRCUIT REPAIR PROCEDURE

1. Connect a DC voltmeter between the pin 2 of IC901 and the chassis ground. If approximately 6 V is not present at the pin 2 of IC906, find the cause. Check R951, R952, and IC906 on the H-Board.
2. When the High Voltage is gradually increased at approximately 33 kV by adjusting, the external variable resistor which is connected between TP96H 1 pin and 2 pin, connect a DC voltmeter between pin 5 of CO-08H and chassis ground. If approximately 12 V is not present at the pin 5 of CO-08H, find the cause. Check Q919, IC906, and those peripherals on the H-Board.
   If approximately 12 V is present at the pin 5 of CO-08H, go to the next step.
3. Connect a DC voltmeter between the pin 1 of IC504 on the A-Board and chassis ground. If 12 V is not present at the pin 1 of IC504, find the cause. Check IC504 and the peripherals.
   If 12 V is present at the pin 1 of IC504, find the cause. Check IC502, D517, and those peripherals.
4. When the circuit is repaired, perform the horizontal oscillator disable circuit test again.

SPECIFICATIONS

Power Source	220 Vac, 50 Hz / 120 Vac, 60 Hz
Power Consumption	340 W max.
Picture Tube	27 inch Flat Square Inver Shadow Mask CRT. Long Life CRT with Impregnated Cathode with Pure Red Phosphor. Stripe trios type Screen with 0.80 mm pitch, P-22 Phosphor, Filter Glass coating. Static and Dynamic Focus.
Resolution	
• Computer:	800×600 (1,024×768 emulation) Interlaced or Non-Interlaced
• Video:	600 lines
Compatibility	
Computer	
• 640×350:	VGA (70 Hz), VESA VGA (84 Hz)
• 640×400:	VGA (70 Hz), VESA VGA (84 Hz)
• 640×480:	VGA (60 Hz), VESA VGA (72 Hz), Apple Macintosh IIfx, IIx, II, IIci, IIcx, IIsi, LC, LCII and Quadra (66.67 Hz)
• 800×600:	VESA Super VGA [SVGA] (56/60/72 Hz)
• 832×624:	Apple, Quadra 16 inch Mode
• 1,024×768:	8514/A, VESA (60/70 Hz), MIPS (71.6 Hz)
Video:	NTSC, PAL
S-Video:	NTSC, PAL
Active Display Area (H×V)	
• Factory setting for PC signal:	500 mm [19.7"]× 375 mm [14.8"] (dependent upon signal timing used)
• Factory setting for NTSC and PAL:	5% over-scan
Synchronization	Variable Frequency Multiscanning 15—64 kHz Horizontal (Automatically) 45—160 Hz Vertical (Automatically) See p. 18 "TIMING CHARTS FOR PRESET MEMORY" for Auto Size & Centering.
Video Amplifier Bandwidth	
• Computer:	40 MHz
• Video:	6 MHz
Input Signal	
Computer	
• Video:	Analog 0.7 Vp-p / 75 Ω terminated, Positive without Sync. Analog 1.0 Vp-p / 75 Ω terminated, Positive Sync. on Green
• Separate Sync:	TTL level 2.4 Vp-p at more than 2 kΩ Horizontal .... Positive/Negative Vertical .... Positive/Negative
• H/V Composite Sync:	TTL Level 2.4 Vp-p at more than 2 kΩ Positive/Negative
• Sync. on Green:	Sync .... 0.3 Vp-p, Negative Video .... 0.7 Vp-p, Positive
• Audio (L&R):	0.4—0.5 Vrms / 22 kΩ
Video	
• Video:	1.0 Vp-p / 75 Ω terminated Sync .... 0.286 Vp-p, Negative Video .... 0.714 Vp-p, Positive
• Audio (L&R):	0.4—0.5 Vrms / 22 kΩ
S-Video	
• Luminance:	1.0 Vp-p / 75 Ω terminated Sync .... 0.286 Vp-p, Negative Luminance .... 0.714 Vp-p, Positive
• Chroma:	0.286 Vp-p / 75 Ω terminated
• Audio (L&R):	0.4—0.5 Vrms / 22 kΩ terminated
Display Colors	Analog Input: Unlimited Colors
Front User Controls	Power Switch, Degauss, Memory Reset, Mode

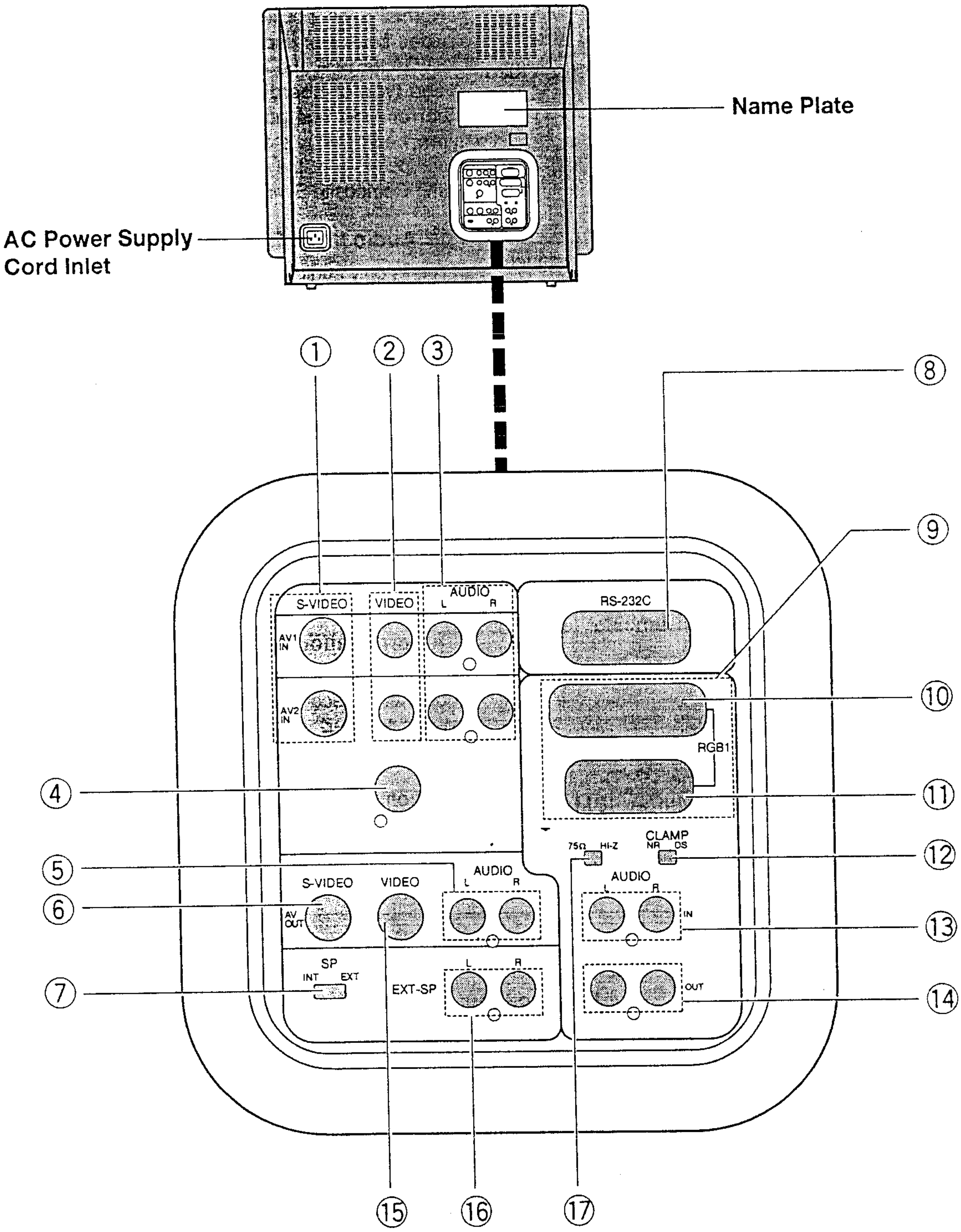
Front Digital User Memorized Controls	Selection (Auto/Manual-RGB/AV): Brightness, Contrast, H-Centering, H-Size, V-Centering, V-Size, Color, Tint, Sharpness, Side-Pincushion, Trapezoid, Volume, Mute, Monitor Select (address-able), Color Temperature (9300K/6500K)
Front Green LEDs	Power Indicator (monitor activated), Mode 2 selected, Manual Input Selected (RGB/AV)
Front Red LED	Power Indicator (monitor standby condition)
Front Yellow LEDs	Auto Input Selected, Color Temperature 6500K selected
Front Inputs	PC 15 pin D-Sub, Video RCA Jack, Audio RCA Jack and S-Video Terminal with input select switch between D-Sub, RCA Jack and S-Terminal by Auto/Manual input selection mode
Rear Inputs	PC 15 pin D-Sub, Mac 15 pin High Density D-Sub Connector, 2 Video RCA Jacks (1 is connected to BNC), 3 Audio RCA Jacks (1 for Computer), 2 S-Video Terminals with input select switch between D-Sub, RCA Jack and S-Terminals by Auto/Manual input selection mode
Rear Outputs	PC 15 pin D-Sub connector, Mac 15 pin High Density D-Sub Connector, BNC for Video, 2 Audio RCA Jacks (1 for computer) and S-Video Terminal
Audio Output Power	Stereo Output 5 W + 5 W with Dome Speaker
External Speaker	Stereo Output 5 W + 5 W
Factory Presets	14 Mode Presets: NTSC, PAL, VGA (640×480, 60 Hz), VGA (640×400, 70 Hz), VESA VGA (640×400, 84 Hz), VESA VGA (640×480, 84 Hz), SVGA (800×600, 56 Hz), SVGA (800×600, 70 Hz), VESA SVGA (800×600, 72 Hz), 8514/A (1,024×768 interlace), 1,024×768 (Non-interlace, 60 Hz), 1,024×768 (Non-interlace, 70 Hz), 1,024×768 (Non-interlace, 72 Hz), Mac II
User Memory	10 user memories
Remote Control	Wireless only / Addressable (16 units maximum) Control
RS-232C Port	Wired control with a PC using an RS-232C Cable
Rear User Controls	75 Ω Termination switching for PC input, Dual Sync and Speaker select
Dimensions (W×D×H)	678 mm [26.7"] × 530 mm [20.9"] × 565 mm [22.2"]
Weight (Net)	58 kg [129 lbs]
Approvals	FCC Class A, UL 1950, CSA 950, FDA
Supplied Accessories	AC Power Supply Cord. D-Sub Signal Cable for MCGA, VGA, SVGA, 8514/A, XGA and Mac II. Operating Instructions and Warranty Card. Wireless Remote Controller. Batteries.
Environmental Conditions	
• Operating Temperature:	0°C to +40°C [+32°F to +104°F]
• Operating Humidity:	20% to 90% Non-Condensing
• Operating Altitude:	10,000 feet max.
• Storage Temperature:	−10°C to +55°C [14°F to +131°F]
• Storage Humidity:	5% to 90% Non-Condensing
• Storage Altitude	40,000 feet max.

Note: Specifications are subject to change without notice.

CONNECTIONS

This monitor can be used with IBM Extended Graphics Array (XGA), IBM Video Graphics Array (VGA), IBM 8514/A, Apple Mac II boards, Apple Quadra and other compatible graphics adapters and also Video-equipment for full motion pictures. S-Video input has the priority over Video input when both the inputs are connected.

Rear View


Name Plate
AC Power Supply Cord Inlet
①
②
③
⑧
⑨
⑩
⑪
④
⑤
⑥
⑦
⑫
⑬
⑭
⑮
⑯
⑰
S-VIDEO
VIDEO
AUDIO
L
R
AV1 IN
AV2 IN
RS-232C
RGB1
CLAMP
NR DS
75Ω HI-Z
AUDIO
L R
IN
OUT
S-VIDEO
VIDEO
AUDIO
L R
AV OUT
SP
INT EXT
EXT-SP
L R

① **S-Video Input Terminal:**

These terminals are for S-Video Signal Cable (not supplied) when used with a video equipment adopting S-Video.

② **Video Input RCA Jack:**

These jacks are for Composite Video Signal Cable (not supplied) when used with a video equipment.

③ Audio Input RCA Jack:

These jacks are only input terminals for video equipments (Signal Cable not supplied).

④ BNC Input Terminal:

This terminal is for Video Signal Cable (not supplied), when used with a video equipment connecting "AV 2".

⑤ Audio Output Jack:

These jacks are the audio output terminal only for Video (Please see Audio RCA Jack for PC for a computer).

⑥ S-Video Output Terminal:

This terminal is the output terminal for S-Video.

⑦ Speaker Select Switch:

Normal position is to the left, marked "INT". When you connect external speakers, switch to the "EXT" position.

⑧ RS-232C Port:

This port is for RS-232C Signal Cable when controlled with operating a computer.

⑨ D-Sub Input/Output:

D-Sub Input/Output consists of D-Sub connector and HD D-Sub connector.

- Two connectors cannot be used as input terminals at the same time. One of two works as input terminal and the other works as output terminal.
  For example, when D-Sub connector is used for input, the HD D-Sub connector becomes the output terminal for other monitor.
- This output terminal is not for RGB 2 output. There is no output for RGB 2.

⑩ 15P D-Sub:

This (the top large type) connector is for the 15P D-Sub end of the D-Sub Signal Cable when used with an IBM or IBM compatible computer.

Note: The "P" in "15P" stands for Plug or male connector.

⑪ 15P High Density (HD) D-Sub:

This (the bottom small type) connector is for the 15P Hi Density D-Sub end of the D-Sub Signal Cable when used wi an Apple Macintosh IIfx, IIx, II, IIci, IIcx, IIsi, LC, LCII or Quadra computer.

⑫ Dual Sync. Switch:

Normal Sync. position (to the left marked "NR") is for use with video boards or computers with Separate Sync. (MCGA, VG SVGA, 8514/A and XGA for example).
The type of board without Dual Sync. signals will operate correctly in this position. Dual Sync. position (to the right marked "DS") is for use with Macintosh or compatib computers (not the Mac LC or LCII) with both Sync. on Gre and Composite Sync. signals.

⑬ Audio Input RCA Jack for PC:

This is only audio input for a computer.

⑭ Audio Output RCA Jack for PC:

This terminal is the audio output terminal to an input terminal other monitor for a computer.

⑮ Video Output Terminals:

This terminal consists of BNC terminal and is the output terminal only for video.

⑯ Audio Output Jack for External Speakers:

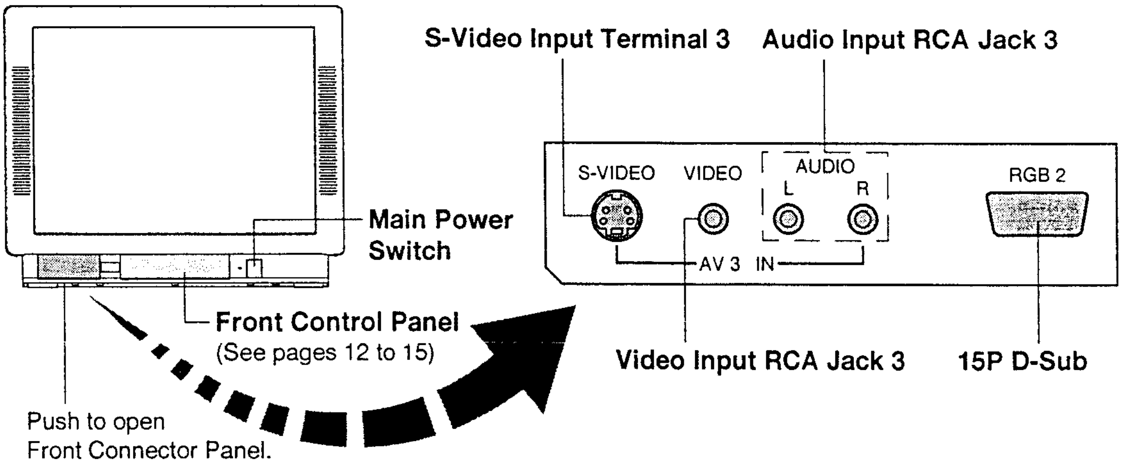
These jacks are the External speaker terminal when Speaker Select Switch is switched at "EXT".

⑰ Termination Switch:

Normal position is to the left, marked "75 Ω (Ohm)". When y connect a second monitor using the original cable, set th switch to "HI-Z" and the second device's switch to the "75 (Ohm)" position (to the right marked "75 Ω").

Caution: When you connect only one display, do not set t Termination Switch to the "HI-Z" position. Display image will be too bright.

Front View



15P D-Sub:

This connector is for the 15P D-Sub end of the D-Sub Signal Cable for IBM or compatible computers.

Video Input RCA Jack 3:

This jack is for Composite Video Single Cable (not supplied) when used with a video equipment.

S-Video Input Terminal 3:

This terminal is for S-Video Single Cable (not supplied) when used with a video equipment adopting S-Video.

Audio Input RCA Jack 3:

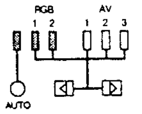
These jacks are only input terminal for video equipment (Signal Cable not supplied).

CONNECTIONS FOR PERSONAL COMPUTERS

1. Turn off the Power Switches of the personal computer and/or your monitor if they are now on.
2. Install the video board if necessary.
   Refer to the video board manual for more information.
3. Connect the D-Sub Signal Cable[*1] to the personal computer and the monitor as shown in the following figures:
   Note: The "P" in "15P" stands for Plug or male connector.
4. Connect the Audio RCA Signal Cable (not supplied) to the personal computer if necessary.
5. If it has not been installed, first connect one end of the AC Power Supply Cord to the monitor and then the other end to the AC Outlet.[*2]
6. Turn on Power Switches of the monitor and the personal computer.

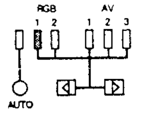
For INPUT

7. Set the Input Select Switch to the "RGB 1", "RGB 2" or "AUTO" position.
8. This completes the monitor installation using the D-Sub connectors and supplied D-Sub Signal Cable.


RGB
1 2
AV
1 2 3
AUTO

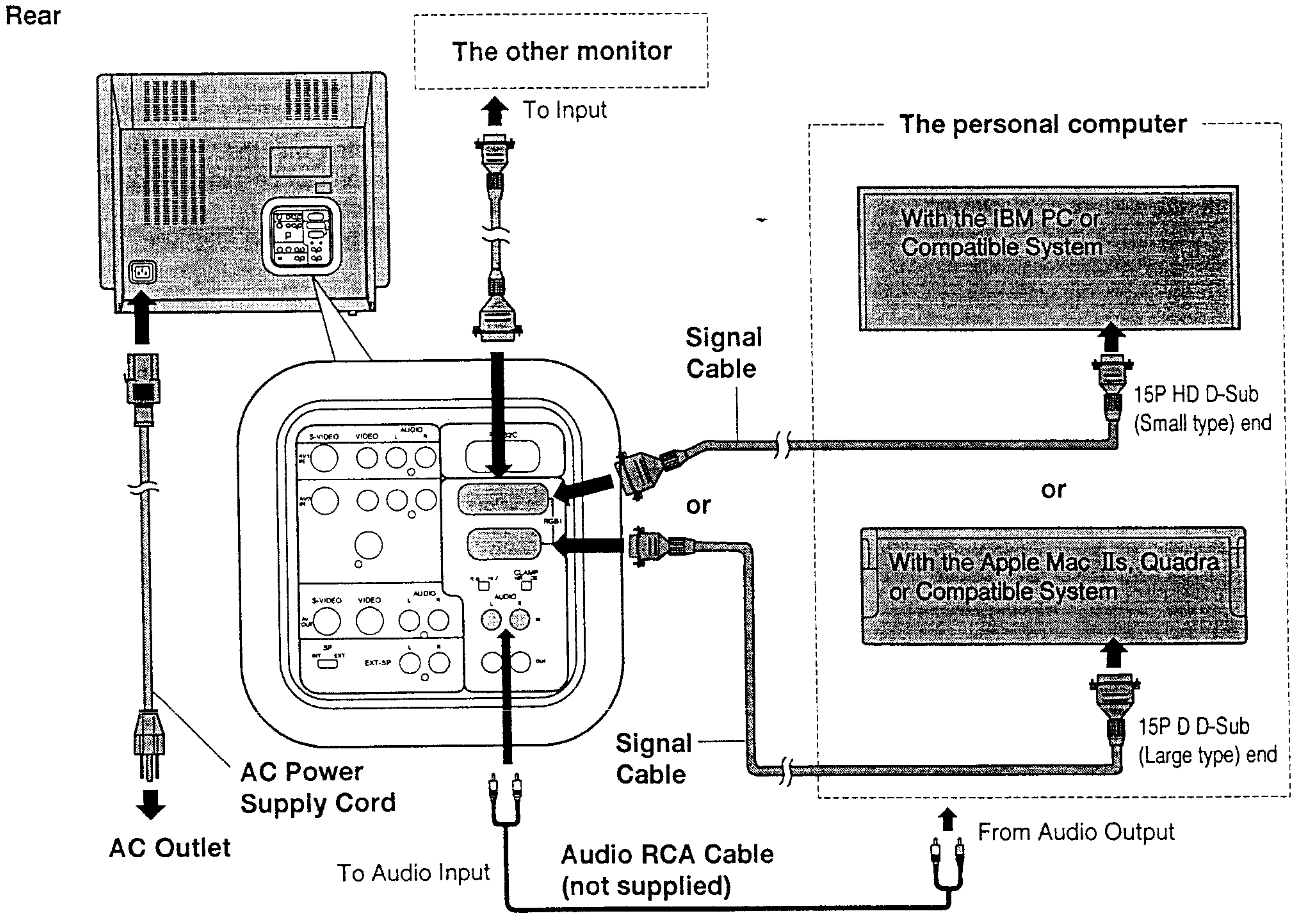
For OUTPUT

7. Set the Input Select Switch to the "RGB 1" position.
8. Set the Termination Switch to the right marked "HI-Z".
9. This completes the monitor installation using the D-Sub connectors and supplied D-Sub Signal Cable.

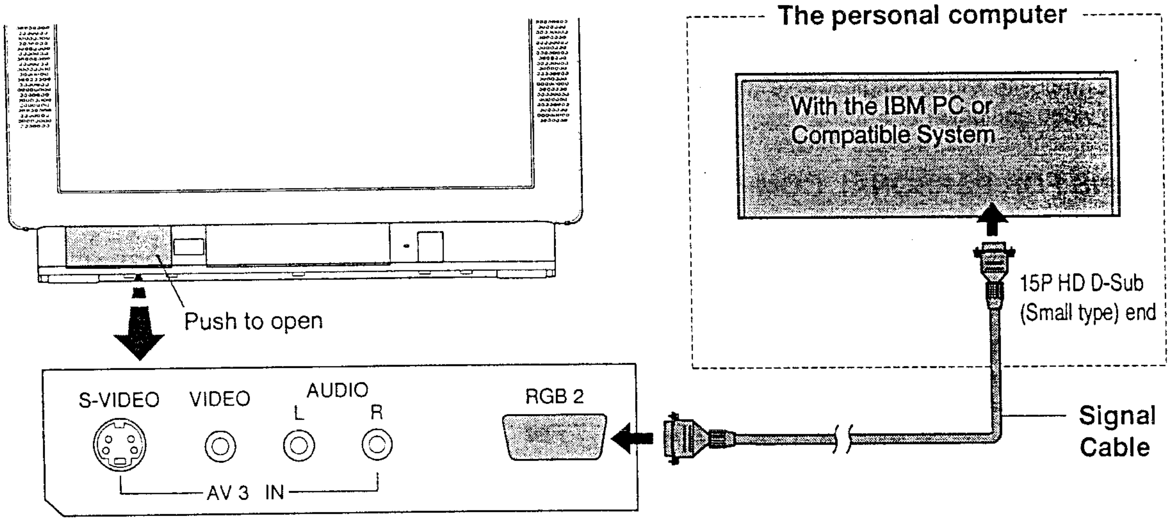

RGB
1 2
AV
1 2 3
AUTO

Caution: [*1] For INPUT, do not connect a 15P D-Sub Signal Cable and a 15P High Density D-Sub Signal Cable at the same time. Use only the supplied D-Sub Cable.
For OUTPUT, do not connect a 15P D-Sub Signal Cable to the D-Sub Signal Input marked "RGB 2" for bridge-connection. Use only the terminals on rear panel marked "RGB 1".

[*2] If the AC Outlet is of the two prong type, please consult with a licensed electrician.


Rear
The other monitor
To Input
The personal computer
With the IBM PC or Compatible System
Signal Cable
15P HD D-Sub (Small type) end
or
or
With the Apple Mac IIs, Quadra or Compatible System
15P D D-Sub (Large type) end
Signal Cable
AC Power Supply Cord
AC Outlet
To Audio Input
Audio RCA Cable (not supplied)
From Audio Output
S-VIDEO
VIDEO
AUDIO
RGB1
EXT-SP

Front


The personal computer
With the IBM PC or Compatible System
15P HD D-Sub (Small type) end
Signal Cable
Push to open
S-VIDEO
VIDEO
AUDIO
L
R
RGB 2
AV 3 IN

Note: If you have a Macintosh IIs or Quadra, make sure that the Dual Sync. Switch on the rear of the monitor is in the Dual Sync. Position (to the right marked "DS").

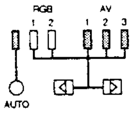
CONNECTIONS FOR VIDEO EQUIPMENTS

1. Turn off the Power Switches of the video equipment and/or your monitor if they are now on.
2. Install the video board if necessary. Refer to the video board manual for more information.
3. Connect the RCA cables (these cables are not supplied with the monitor) to the video equipment and the monitor as shown in the following figures (on the next page):
4. If it has not been installed, first connect one end of the AC Power Supply Cord to the monitor and then the other end to the AC Outlet.

Caution: If the AC Outlet is of the two prong type, please consult with a licensed electrician.

5. Turn on the Power Switches of the monitor and the video equipment.
6. Set the Input Select Switch to the "AV 1" of Video, "AV 2" of Video, "AV 3" of Video or "AUTO" position.

Note: When select "AV 2", RCA Jack or BNC Terminal is available for video.

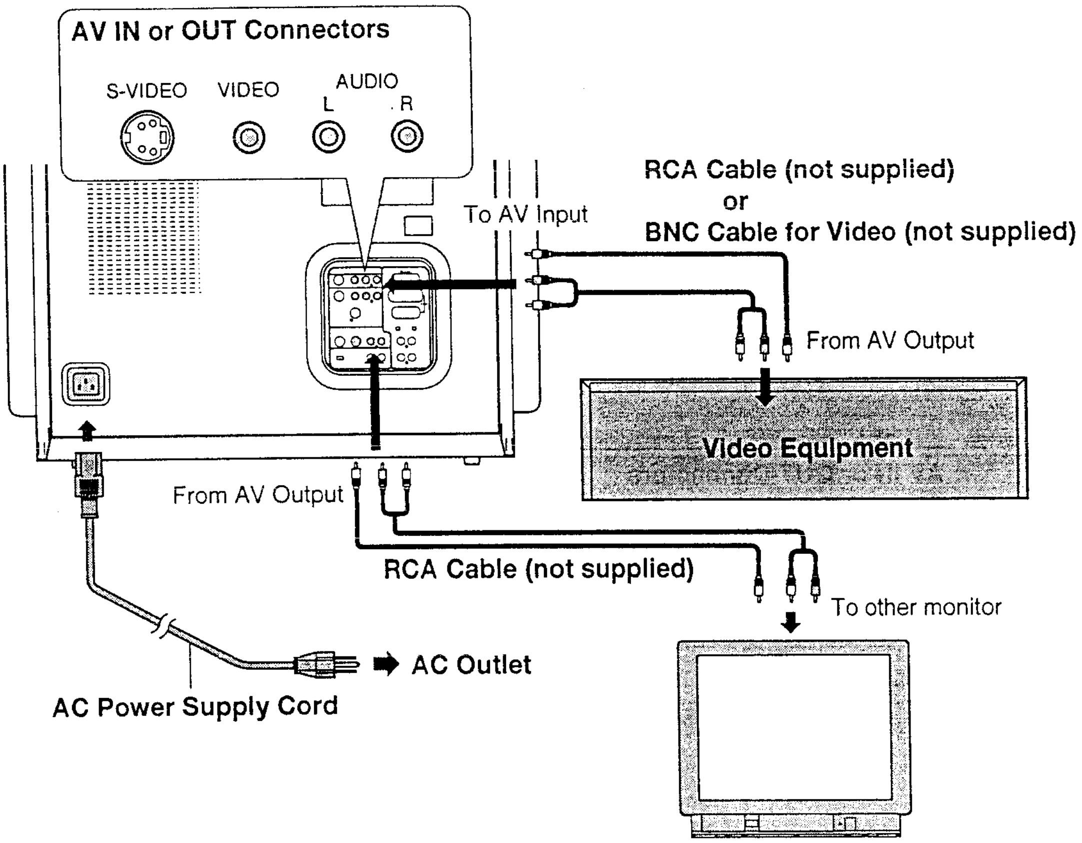

RGB
1
2
AV
1
2
3
AUTO

For OUTPUT:

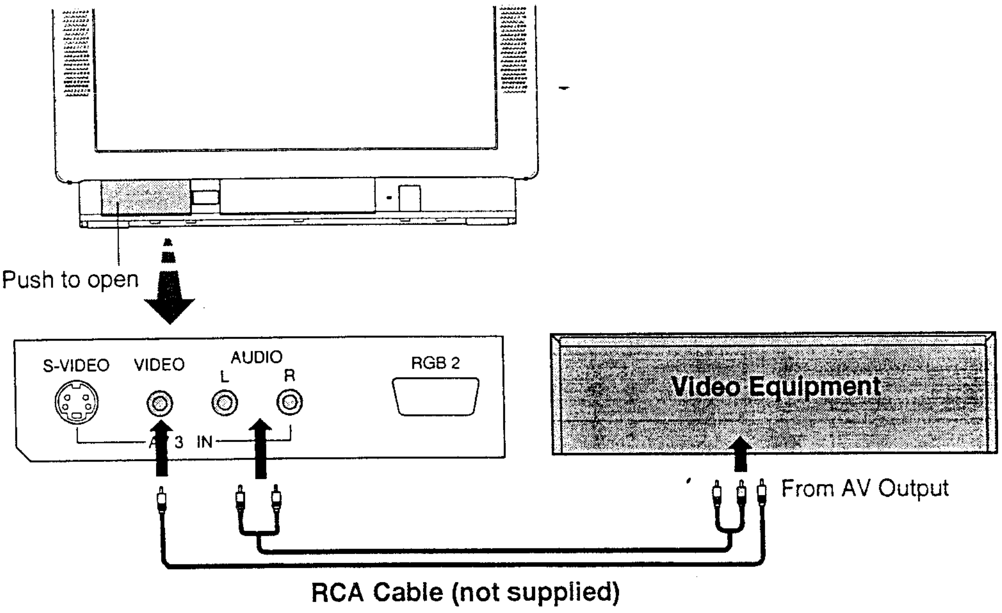
The signal which is selected with the Input Select Switcl and displayed on the screen can be available on the outpu terminals for bridge-connection.

7. This completes the installation of your monitor.

Rear


AV IN or OUT Connectors
S-VIDEO
VIDEO
AUDIO
L
R
To AV Input
RCA Cable (not supplied)
or
BNC Cable for Video (not supplied)
From AV Output
Video Equipment
From AV Output
RCA Cable (not supplied)
To other monitor
AC Outlet
AC Power Supply Cord

Front


Push to open
S-VIDEO
VIDEO
AUDIO
L
R
RGB 2
A 3 IN
Video Equipment
From AV Output
RCA Cable (not supplied)

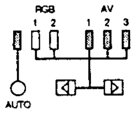
CONNECTIONS FOR S-VIDEO EQUIPMENTS

1. Turn off the Power Switches of the video equipment and/or your monitor if they are now on.
2. Install the video board if necessary.
   Refer to the video board manual for more information.
3. Connect the S-Video Cables (these cables are not supplied with the monitor) and Audio RCA Cables to the video equipment and the monitor as shown in the following figures:
4. If it has not been installed, first connect one end of the AC Power Supply Cord to the monitor and then the other end to the AC Outlet.

Caution: If the AC Outlet is of the two prong type, please consult with a licensed electrician.

CONNECTIONS FOR S-VIDEO EQUIPMENTS

5. Turn on the Power Switches of the monitor and the video equipment.
6. Set the Input Select Switch to the "AV 1" of S-Video, "AV 2" of S-Video, "AV 3" of S-Video or "AUTO" position.

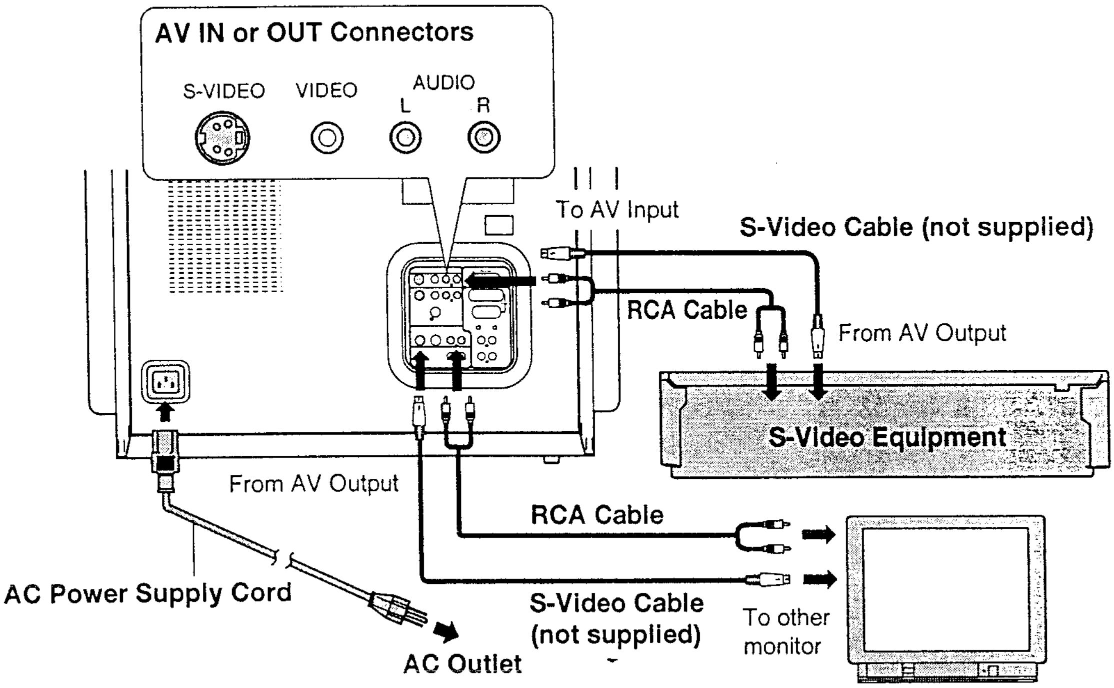

RGB
1 2
AV
1 2 3
AUTO

For OUTPUT:

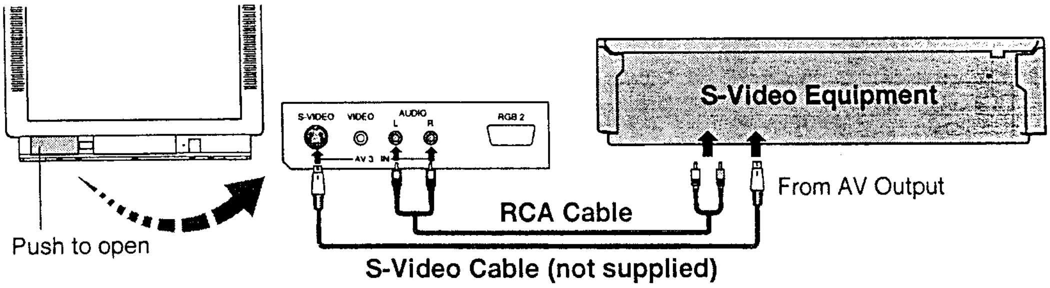
The signal which is selected with the Input Select Switch and displayed on the screen can be available on the outpu terminals for bridge-connection.

7. This completes the installation of your monitor.

Rear


AV IN or OUT Connectors
S-VIDEO
VIDEO
AUDIO
L
R
To AV Input
S-Video Cable (not supplied)
RCA Cable
From AV Output
S-Video Equipment
From AV Output
RCA Cable
AC Power Supply Cord
S-Video Cable
(not supplied)
To other
monitor
AC Outlet

Front

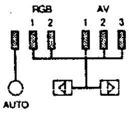

S-VIDEO
VIDEO
AUDIO
L
R
RGB 2
AV 3
IN
S-Video Equipment
From AV Output
RCA Cable
Push to open
S-Video Cable (not supplied)

CONNECTIONS FOR EXTERNAL SPEAKERS

1. Turn off the Power Switches of the external speakers and/or your monitor if they are now on.
2. Connect the Audio RCA Cables to the external speakers and the monitor as shown in the following figures:
3. Set the Speaker Select Switch to the right marked “EXT”.
4. If it has not been installed, first connect one end of the AC Power Supply Cord to the monitor and then the other end to the AC Outlet.

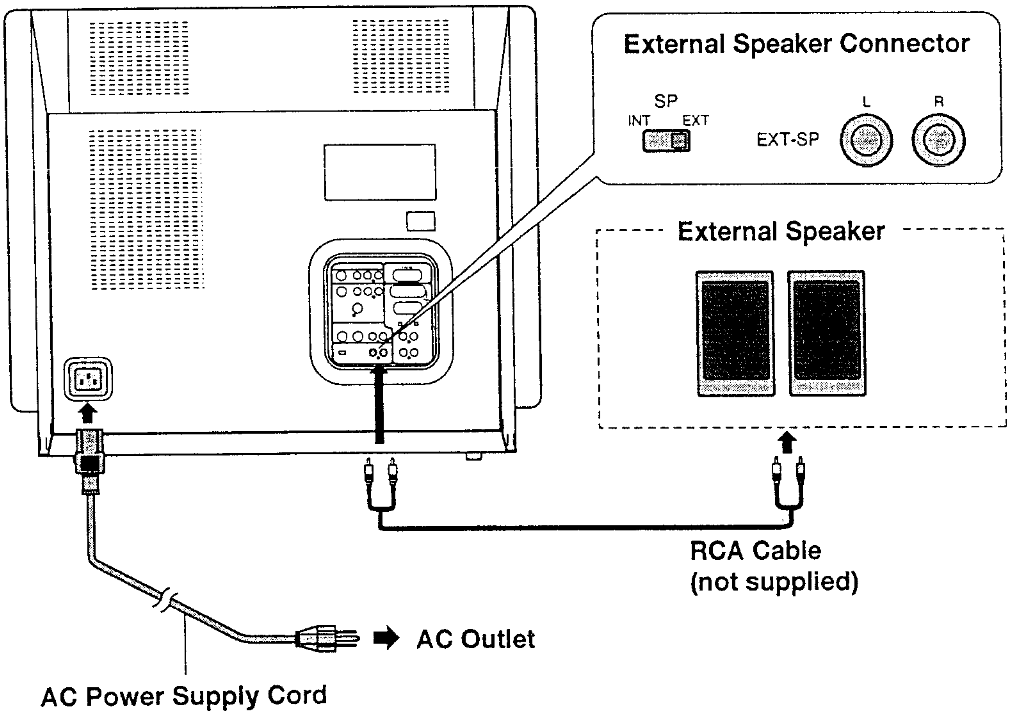
Caution: If the AC Outlet is of the two prong type, please consult with a licensed electrician.

5. Turn on the Power Switches of the monitor and the external speakers.
6. Set the Input Select Switch in any position.


RGB
1 2
AV
1 2 3
AUTO

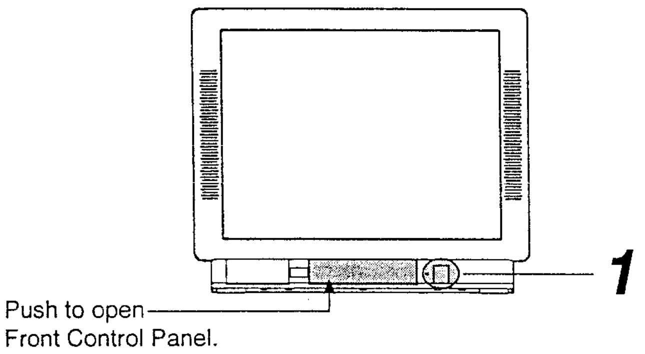
7. This completes the installation of your monitor.

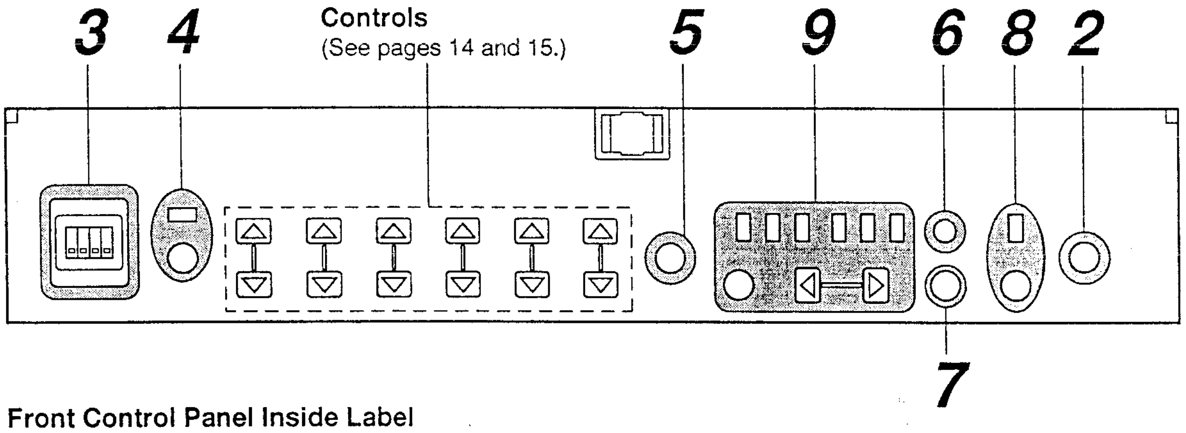
Rear


External Speaker Connector
SP
INT EXT
EXT-SP
L
R
External Speaker
RCA Cable
(not supplied)
AC Outlet
AC Power Supply Cord

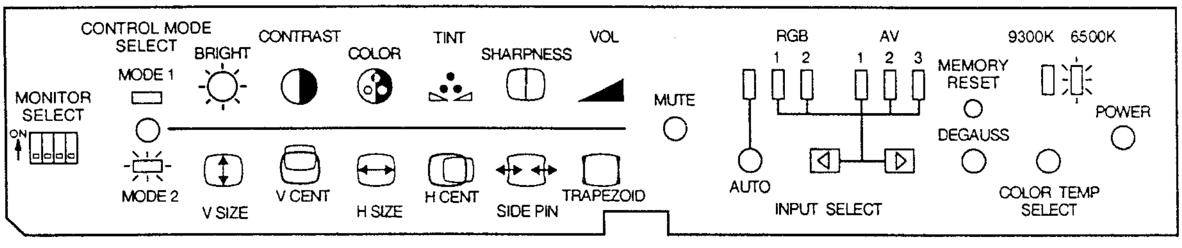
USER CONTROL LOCATIONS AND ADJUSTMENTS

Front View


1
Push to open
Front Control Panel.

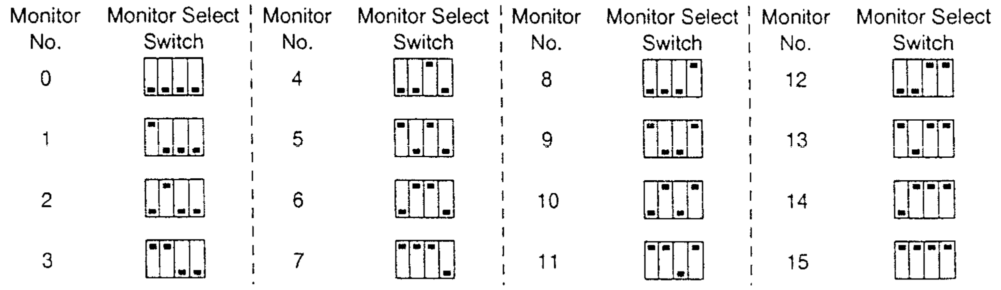

3
4
Controls
(See pages 14 and 15.)
5
9
6
8
2
7

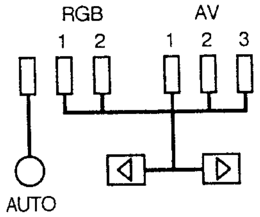
Front Control Panel Inside Label


CONTROL MODE SELECT
MODE 1
MODE 2
MONITOR SELECT
ON
BRIGHT
CONTRAST
COLOR
TINT
SHARPNESS
VOL
MUTE
V SIZE
V CENT
H SIZE
H CENT
SIDE PIN
TRAPEZOID
RGB 1 2
AV 1 2 3
AUTO
INPUT SELECT
MEMORY RESET
DEGAUSS
9300K 6500K
COLOR TEMP SELECT
POWER

SWITCHES

Please familiarize yourself with the User Controls, Switches Functions of the monitor.

1. Main Power Switch Power Indicator	Push to turn the monitor to standby condition, and push again to turn the monitor off. When the monitor is in standby, the Power Indicator will light red.
2. Power Switch Power Indicatior	Push to activate the monitor, and push again to turn the monitor standby condition. When the monitor is in activated, the Power Indicator will light green.
3. Monitor select Switch MONITOR SELECT 	To use the Addressable Remote Control, set the Monitor No. with the Monitor Select Switch. The Monitor No. can be set to "0" to "15" as follows.  Monitor No. / Monitor Select Switch 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 **Note:** You would like to control just one monitor of them up to 16 monitors.

4. Control Mode Switch Mode Indicator ▭ LED Indicator ○ Selector Switch MODE 1 ▭ ▭ MODE 2	The Control Mode Switch is used for selecting Mode 1 or Mode 2. Mode 1 is set when the monitor is turned activated. To select Mode 2, press the Control Mode Switch located below the LED once and the green Mode Indicator will turn on. To then select Mode 1, press the Control Mode Switch once and the green Mode Indicator will turn off. **Mode 1:** In this mode you can adjust the Brightness and Contrast and Color and Tint and Sharpness and Volume level. The green Mode Indicator is off in Mode 1. **Mode 2:** In this mode you can adjust the Monitor Image Size and Position, Side-Pincushion and Trapezoidal Distortion Controls. The green Mode Indicator will be on in Mode 2. **Note:** The Mode Indicator will automatically switch back to Mode 1 approximately 60 seconds after the last operation of any Mode 2 controls.
5. Mute Switch MUTE ○	The Mute Switch is used for setting the Audio Output Level to zero. The latest condition is kept when the monitor is turned activated. To set the Audio Output level to zero, press the Mute Switch once. The Audio Output level is Switched back to the previous level when the mute Switch is pressed once again. When the Volume Control key is pressed or power is turned on and off, the mute will be cleared and back to the working position.
6. Memory Reset Switch MEMORY RESET ○	You can easily reset the display image (except for the Color Temperature) to the factory preset levels. When you press the Memory Reset Switch using a ballpoint pen point, all of the memorized current control settings are automatically deleted and factory presetting data is used for the Image control.
7. Degauss Switch* DEGAUSS ○	In order to eliminate the build up of stray magnetic fields causing any color impurity, press in and hold the Degauss Switch for several seconds. Your screen image will jump and waver a little as the screen is demagnetized. **Note:** Do not press the Degauss Switch continuously. Please allow a minimum interval of 5 minutes before using this Switch.
8. Color Temperature Switch 9300K 6500K ▯ ▯ ○ COLOR TEMP SELECT	The Color Temperature Switch is used for selecting 9300K mode or 6500K mode. 9300K mode is set when the monitor is turned activated at first. To select 6500K mode, press the Color Temperature Switch once and the yellow 6500K Indicator will turn on. To then select 9300K mode, press the Color Temperature Switch once and the yellow 6500K Indicator will turn off. **9300K mode:** In this mode the Picture Color Image is a little bit bluish compared to 6500K mode. The yellow 6500K mode Indicator is off in 9300K mode. **6500K mode:** In this mode the Picture Color Image is a little bit reddish compared to 9300K mode. The yellow 6500K mode Indicator is on in 6500K mode. **Note:** The Color Temperature mode is kept the last condition just before the monitor was turned off.
9. Input Select Switch Input Select Indicator 	The Input Select Switch is used for selecting the input connector and the mode of operation of input selection. If you press the Input Select Switch, in the Auto Position, the video source is automatically selected in the order when the previous video source is not active: RGB 1 → RGB 2 → AV 1 → AV 2 → AV 3 → RGB 1 If you press the "▶"Switch, the Position manually changes in the order: RGB 1 → RGB 2 → AV 1 → AV 2 → AV 3 → RGB 1 If you press the "◀" Switch, the Position manually changes in the order: RGB 1 → AV 3 → AV 2 → AV 1 → RGB 2 → RGB 1 **Auto Position:** When connected to more than two video inputs at the same time, the monitor will be automatically connected to the active video source. If more than two video inputs are active, the video source selected in the above order will have the priority over than the other video sources. The Input Select Indicator in the Auto position will light yellow and the automatically selected video source Position will light green at the same time. **RGB 1 Position:** Use the RGB 1 Position if your video board uses the RGB 1 connector on the rear panel. The RGB 1 Input Select Indicator will light green when selected either manually or automatically. **RGB 2 Position:** Use the RGB 2 Position if your video board uses the RGB 2 connector on the rear panel. The RGB 2 Input Select Indicator will light green when selected either manually or automatically. **AV 1 Position:** Use the AV 1 Position if your video equipment uses the AV 1 connector on the rear panel. The AV 1 Input Select Indicator will light green when selected either manually or automatically. **AV 2 Position:** Use the AV 2 Position if your video equipment uses the AV 2 connector on the rear panel. The AV 2 Input Select Indicator will light green when selected either manually or automatically. **AV 3 Position:** Use the AV 3 Position if your video equipment uses the AV 3 connector on the rear panel. The AV 3 Input Select Indicator will light green when selected either manually or automatically.

* **Caution:** Do not place the floppy disk on top of the monitor as it may be erased when the Power is turned on or the Degauss Switch is pressed.

MODE ADJUSTMENTS

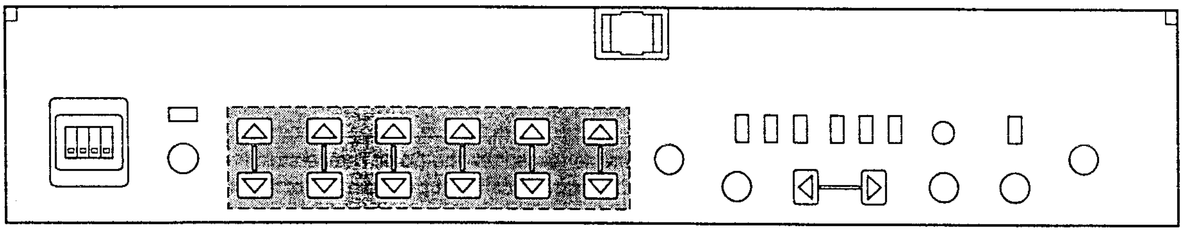
This display control panel has two Modes, "**Mode 1**" and "**Mode 2**".

How to Select the Mode

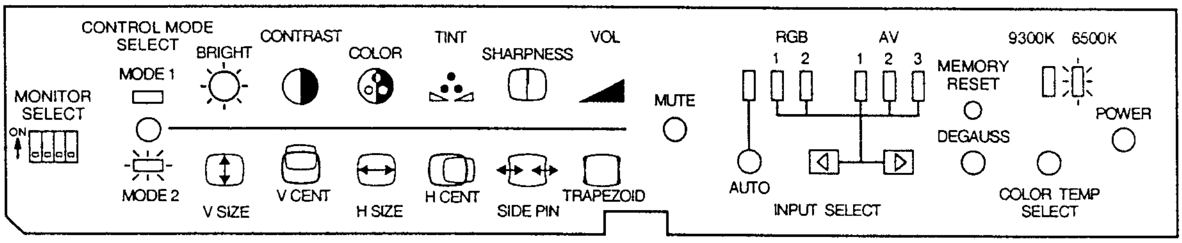
At Power ON the Mode is set to Mode 1 with the Mode Indicator turned OFF, that is dark. To select Mode 2, press the Control Mode Switch once. This will cause the Mode Indicator to turn ON, lighting green (Mode 2). Pressing the Control Mode Switch again will alternate modes: Mode 2 → Mode 1 → Mode 2 → Mode 1.

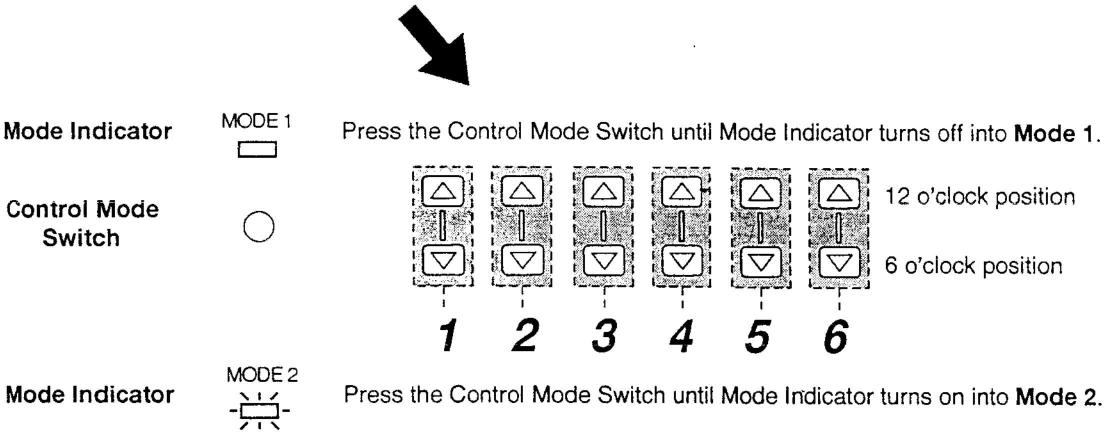
Note: The Mode Indicator will automatically switch back to Mode 1 approximately 60 seconds after the last operation of any Mode 2 controls.

Controls



Front Control Panel Inside Label


CONTROL MODE SELECT
MODE 1
MONITOR SELECT
ON
MODE 2
BRIGHT
CONTRAST
COLOR
TINT
SHARPNESS
VOL
MUTE
V SIZE
V CENT
H SIZE
H CENT
SIDE PIN
TRAPEZOID
RGB
1
2
AV
1
2
3
AUTO
INPUT SELECT
MEMORY RESET
DEGAUSS
9300K
6500K
POWER
COLOR TEMP SELECT


Mode Indicator
MODE 1
Control Mode Switch
12 o'clock position
6 o'clock position
1
2
3
4
5
6
Mode Indicator
MODE 2

Press the Control Mode Switch until Mode Indicator turns off into **Mode 1**.

Press the Control Mode Switch until Mode Indicator turns on into **Mode 2**.

Mode 1

1. Brightness Control ▲ ▼ ☼	To set the image Brightness (Black Level): Lighter: Press ▲ in the 12 o'clock position. Darker: Press ▼ in the 6 o'clock position.
2. Contrast Control ▲ ▼ ◑	To set the image Contrast (White Level): Lighter: Press ▲ in the 12 o'clock position. Darker: Press ▼ in the 6 o'clock position. **Note:** If your computer's video signal amplitude is 1.0 V, adjust the display using this control.

3. Color Saturation Control ▲ ▼	To set the Color Density: Deeper: Press ▲ in the 12 o'clock position. Lighter: Press ▼ in the 6 o'clock position.
4. Tint Control ▲ ▼	To set the Tint: Greenish: Press ▲ in the 12 o'clock position. Reddish: Press ▼ in the 6 o'clock position. **Note:** Not effective on RGB mode.
5. Sharpness Control ▲ ▼	To set the image sharpness level: Sharper: Press ▲ in the 12 o'clock position. Smeary: Press ▼ in the 6 o'clock position. **Note:** Not effective on RGB mode.
6. Volume Control ▲ ▼	To set the volume level: Bigger: Press ▲ in the 12 o'clock position. Smaller: Press ▼ in the 6 o'clock position.

Mode 2

1. Vertical Size Control ▲ ▼	To adjust the vertical size of the image: Height larger: Press ▲ in the 12 o'clock position. Height smaller: Press ▼ in the 6 o'clock position.
2. Vertical Centering Control ▲ ▼	To move the image vertically: Up: Press ▲ in the 12 o'clock position. Down: Press ▼ in the 6 o'clock position.
3. Horizontal Size Control ▲ ▼	To adjust the horizontal size of the image: Width larger: Press ▲ in the 12 o'clock position. Width smaller: Press ▼ in the 6 o'clock position.
4. Horizontal Centering Control ▲ ▼	To move the image horizontally: Right: Press ▲ in the 12 o'clock position. Left: Press ▼ in the 6 o'clock position.
5. Side-Pincushion Control ▲ ▼	To set the Side-Pincushion distortion level (Shape of Image Sides). To move the image sides: Out (Concave): Press ▲ in the 12 o'clock position. In (Convex): Press ▼ in the 6 o'clock position.
6. Trapezoid Control ▲ ▼	To set the Trapezoidal distortion level (Top or Bottom Image Width). To make the Top image Edge wider, press ▲ in the 12 o'clock position. To make the Bottom image Edge wider, press ▼ in the 6 o'clock position.

Note: Even if you press two keys at the same time, both keys won't operate.

MEMORIES

This monitor has three types of memory to store the data sets in. These control the on-screen image. The first type is the **Use Memory**. The second type is the **Preset Memory** which is preset by the factory (See page 18 for Timing). The third type is the **Last Status Memory**. All User Control settings for the on-screen image are automatically saved approximately 3 seconds after the last adjustment.

User Memory

(10 user memories available besides factory presets)
The User Control data sets are stored in the **User Memory**. The **User Memory** and the **Preset Memory** control the Horizontal Size, Vertical Size, Horizontal Centering, Vertical Centering, Brightness, Contrast, Side-Pincushion and Trapezoid adjustments of the displayed image.
The **User Memory** has priority over the **Preset Memory**, see the figure on the next page, Signal Discrimination Flowchart.
If the **User Memory** is completely used and a new set of User Control data is saved, the oldest data set in the user memory is deleted and the new data set is automatically saved approximately 3 seconds after the last adjustment.

Last Status Memory

(3 Data Sets Stored)
The **Last Status Memory** decides the statuses on the Vide Input mode, the Color Temperature and the Power on/off jus after the monitor is turned on with the Main Power Switch and the Power Switch.
The **Last Status Memory** stores the Video Input mode, th Color Temperature and the Power on/off status just before th monitor is turned off.
When the monitor is turned on with the Main Power Switc these 3 modes are set to the same as the previous status.

RS-232C PORT

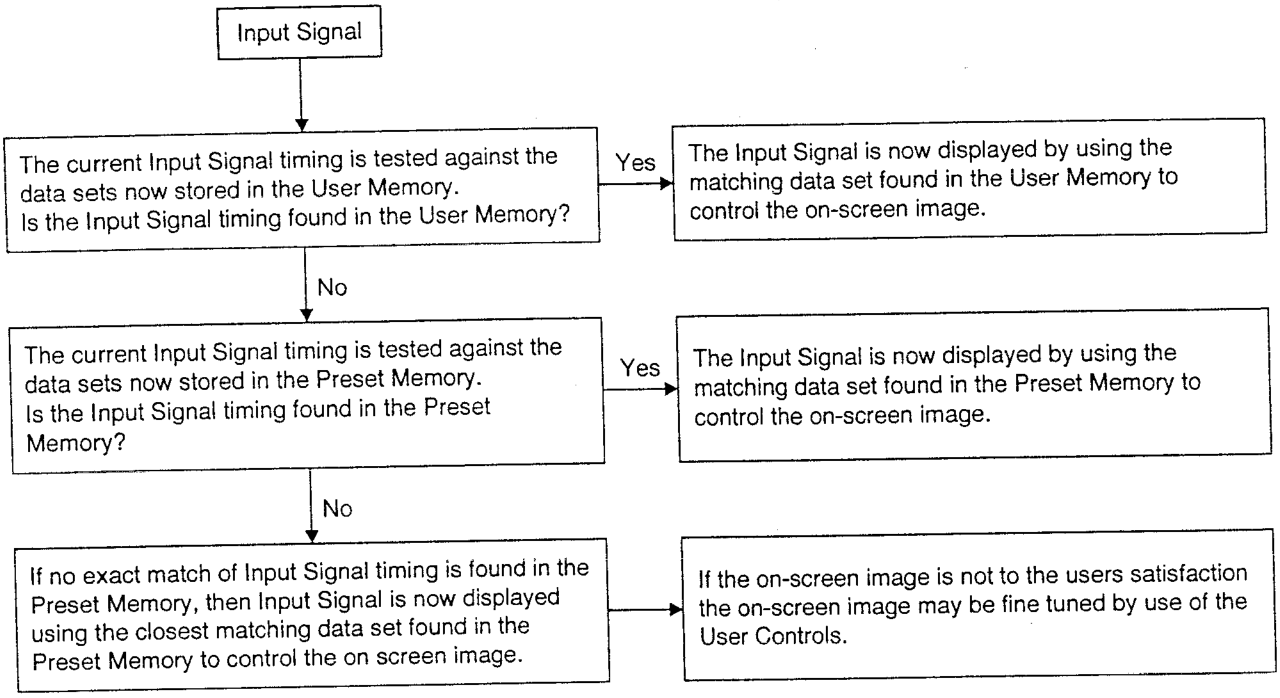
The 29GA has an RS-232C port on rear panel. Users can control Brightness, Contrast, Horizonal Centering, Vertical Centering, Horizontal Size, Vertical Size, Color, Tint, Sharpness, Volume, Mute, Input Select, Degauss, Color Temperature, Side Pincushion and Trapezoid with a computer by connecting an RS-232C cable.

POWER MANAGEMENT

The 29GA is equipped with power management circuitry, conforming to the VESA DPMS. Depending on the signal from a computer, switching occurs between four modes to minimize non-essential energy consumption.

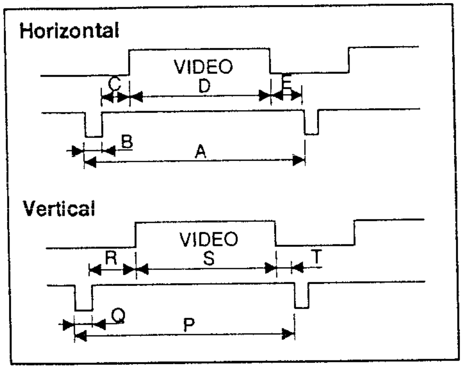
State	Signal from PC			Monitor State at 120 V AC		
	Signals					
	Horizontal	Vertical	Video		Power Consumption	Power LED
ON	Yes	Yes	Active	Active	Normal	Green
Standby	No	Yes	Blanked	Standby	Approx. 12 W	Flashing (Interval 1 sec.)
Suspend	Yes	No	Blanked	Standby	Approx. 12 W	
Active off	No	No	Blanked	Active off	Approx. 7 W	Flashing (Interval 3 sec.)

SIGNAL DISCRIMINATION FLOWCHART

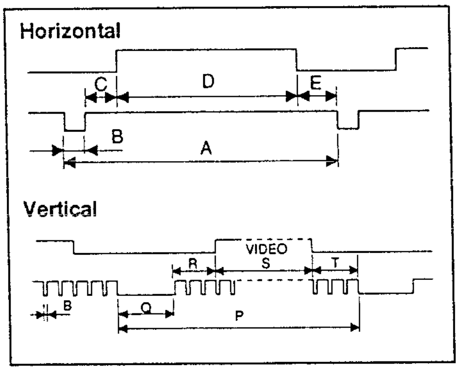

Input Signal
The current Input Signal timing is tested against the data sets now stored in the User Memory.
Is the Input Signal timing found in the User Memory?
Yes
The Input Signal is now displayed by using the matching data set found in the User Memory to control the on-screen image.
No
The current Input Signal timing is tested against the data sets now stored in the Preset Memory.
Is the Input Signal timing found in the Preset Memory?
Yes
The Input Signal is now displayed by using the matching data set found in the Preset Memory to control the on-screen image.
No
If no exact match of Input Signal timing is found in the Preset Memory, then Input Signal is now displayed using the closest matching data set found in the Preset Memory to control the on screen image.
If the on-screen image is not to the users satisfaction the on-screen image may be fine tuned by use of the User Controls.

TIMING CHARTS FOR PRESET MEMORY

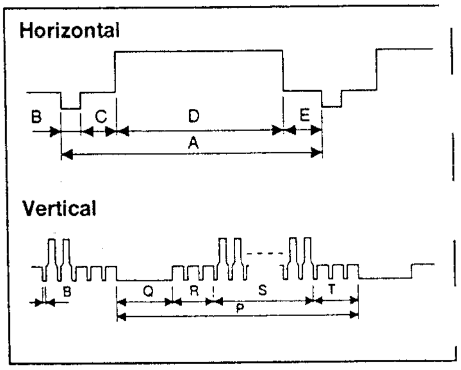
Separate Sync.



H/V Composite Sync.



Sync. on Green



Preset Timing

This monitor will auto size and center with boards which use the following timings (12 modes).

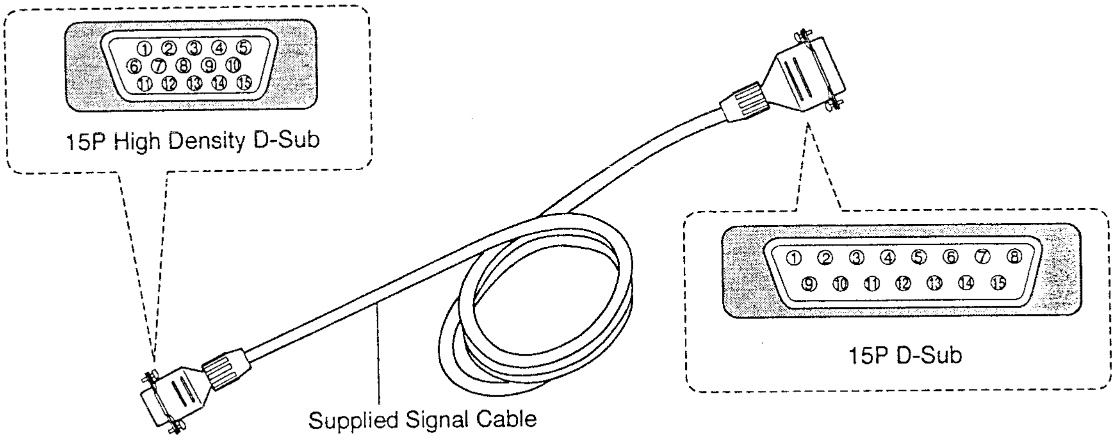
Mode / Signal Timing	XGA			VESA		
	VGA2	VGA3	8514/A*	SVGA / 56 Hz	SVGA / 60 Hz	SVGA / 72 Hz
	640×400	640×480	1,024×768	800×600	800×600	800×600
fH (kHz)	31.47	31.47	35.520	35.156	37.879	48.077
Aμs (Line time total)	31.775	31.775	28.15	28.444	26.4	20.875
Bμs (Sync pulse)	3.813	3.813	3.92	2.0	3.2	2.4
Cμs (Back porch)	1.907	1.907	1.25	3.556	2.2	1.28
Dμs (Active)	25.42	25.42	22.8	22.222	20.0	16.0
Eμs (Front porch)	0.636	0.636	0.18	0.667	1.0	1.120
fV (Hz)	70.09	59.95	86.95	56.25	60.317	72.187
P ms (Frame time total)	14.267	16.682	11.5 (Field time)	17.778	16.579	13.853
Q ms (Sync pulse)	0.064	0.064	0.113	0.057	0.106	0.125
R ms (Back porch)	1.112	1.049	0.564	0.626	0.607	0.478
S ms (Active)	12.71	15.252	10.81	17.067	15.84	12.480
T ms (Front porch)	0.381	0.318	0.014	0.028	0.026	0.77
H. Sync polarity	Negative	Negative	Positive	Positive or Negative	Positive	Positive
V. Sync polarity	Positive	Negative	Positive	—	Positive	Positive

*8514/A is interlaced

Mode / Signal Timing	VESA				—	Apple
	VGA2	VGA3	48 kHz / 60 Hz	56 kHz / 70 Hz	58 kHz / 72 Hz	Mac II
	640×400	640×480	1,024×768	1,024×768	1,024×768	640×480
fH (kHz)	37.86	37.86	48.363	56.476	57.803	35.0
Aμs (Line time total)	26.413	26.413	20.677	17.707	17.3	28.571
Bμs (Sync pulse)	1.27	1.27	2.092	1.813	1.7	2.116
Cμs (Back porch)	4.063	4.063	2.462	1.92	2.5	3.175
Dμs (Active)	20.317	20.317	15.754	13.653	12.8	21.164
Eμs (Front porch)	0.762	0.762	0.369	0.32	0.3	2.116
fV (Hz)	84.135	72.809	60	70.069	71.627	66.67
P ms (Frame time total)	11.886	13.735	16.667	14.272	13.961	15.0
Q ms (Sync pulse)	0.079	0.079	0.124	0.106	0.035	0.086
R ms (Back porch)	1.004	0.74	0.6	0.513	0.623	1.114
S ms (Active)	10.565	12.678	15.88	13.599	13.286	13.714
T ms (Front porch)	0.238	0.238	0.062	0.053	0.017	0.086
H. Sync polarity	Negative	Negative	Sync. on Green	Positive or Negative	—	Composite, Negative and Sync. on Green
V. Sync polarity	Positive	Negative	—	—	—	—

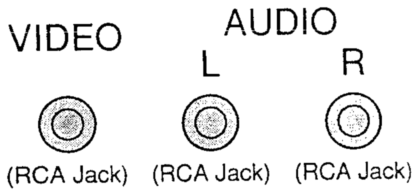
SIGNAL CABLE PIN ASSIGNMENTS

VGA Cable

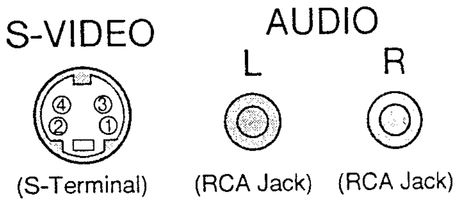

① ② ③ ④ ⑤
⑥ ⑦ ⑧ ⑨ ⑩
⑪ ⑫ ⑬ ⑭ ⑮
15P High Density D-Sub
① ② ③ ④ ⑤ ⑥ ⑦ ⑧
⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮
15P D-Sub
Supplied Signal Cable

Signal	**Mac XX** 15P High Density D-Sub	**VGA** 15P D-Sub
*Red	1	2
*Green / Sync. on Green	2	5
*Blue	3	9
H. Sync. / H. + V. Sync.	13	3
V. Sync.	14	12
Ground	4, 6, 7, 8, 10, 11 & Shell	1, 4, 6, 11, 13, 14 & Shell
No Connection	5, 9, 15	8, 10, 15
Reserved	12	7

Composite Video


VIDEO
AUDIO
L
R
(RCA Jack)
(RCA Jack)
(RCA Jack)

S-Video Input


S-VIDEO
AUDIO
L
R
④ ③
② ①
(S-Terminal)
(RCA Jack)
(RCA Jack)

Signal	S-Terminal
Luminance Signal (Y)	3
Luminance Signal (GND)	1
Chroma Signal (C)	4
Chroma Signal (GND)	2

DISASSEMBLY PROCEDURES

1. DISASSEMBLY FLOWCHART

This flowchart indicates disassembly items of the cabinet parts and Circuit Boards in order to find the items necessary for servicing. When reassembling, perform the steps in the reverse order.

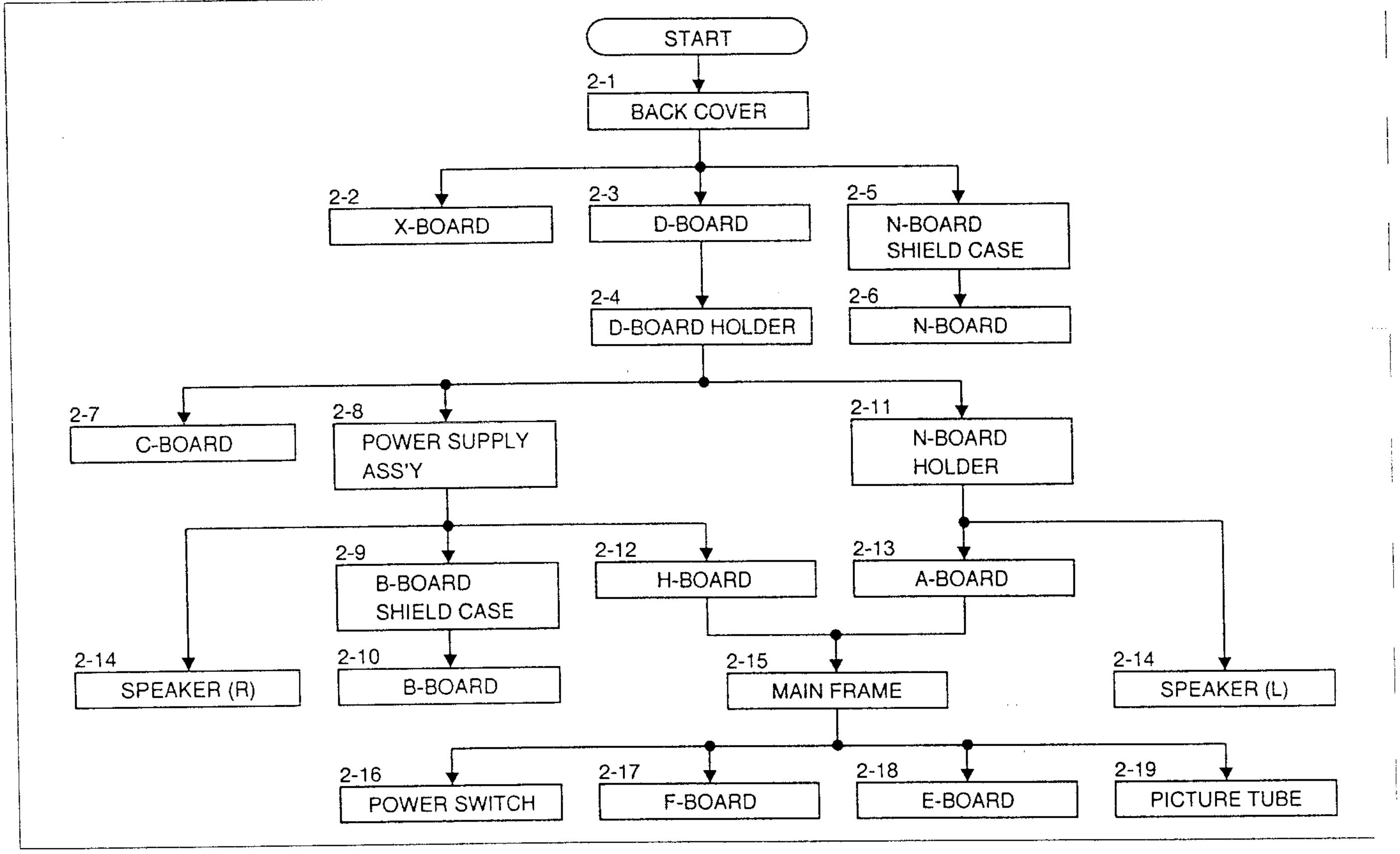

START
2-1 BACK COVER
2-2 X-BOARD
2-3 D-BOARD
2-5 N-BOARD SHIELD CASE
2-4 D-BOARD HOLDER
2-6 N-BOARD
2-7 C-BOARD
2-8 POWER SUPPLY ASS'Y
2-11 N-BOARD HOLDER
2-9 B-BOARD SHIELD CASE
2-12 H-BOARD
2-13 A-BOARD
2-14 SPEAKER (R)
2-10 B-BOARD
2-15 MAIN FRAME
2-14 SPEAKER (L)
2-16 POWER SWITCH
2-17 F-BOARD
2-18 E-BOARD
2-19 PICTURE TUBE

Figure 1

2-1. Removal of the Back Cover

1. Remove 20 screws Ⓐ and pull back the Back Cover in the derection indicated by the arrow as shown in Figure 2.

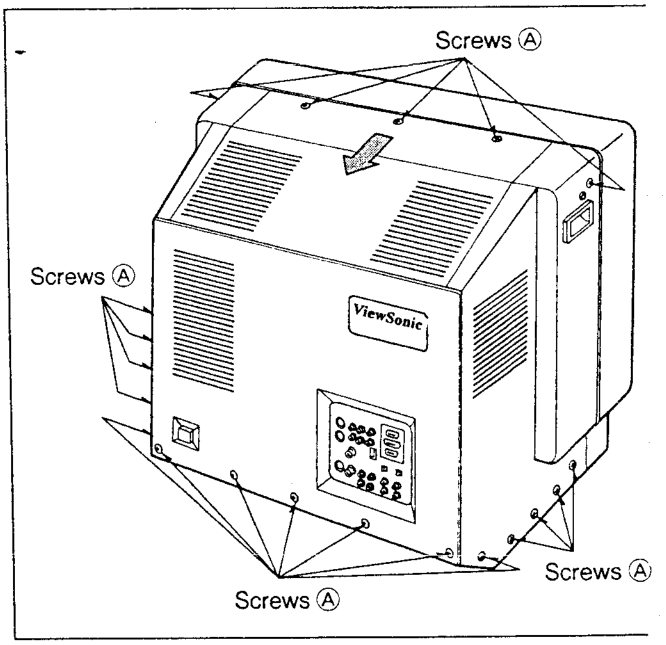

Screws Ⓐ
Screws Ⓐ
ViewSonic
Screws Ⓐ
Screws Ⓐ

Figure 2

2-2. Removal of the X-Board

1. Disconnect connectors CO-11X, CO-21X,CO-31X, CO-32X, CO-33X, CO-41X, CO-42X,CO-43X, CO-51X, CO-52X and CO-71X on the X-Board.
2. Unlock the 4 Lock Clampers Ⓑ as shown in Figure 3.
3. Lift the X-Board in the derection indicated by the arrow with connectors CO-01X, CO-02X and CO-03X as shown in Figure 3.

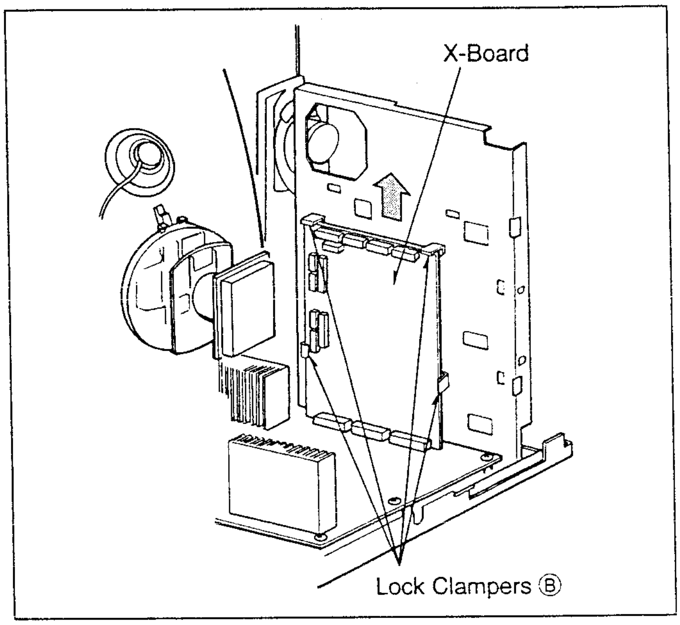


Figure 3

2-3. Removal of the D-Board

1. Disconnect connectors CO-09D, CO-10D, CO-41D, CO-42D, CO-43D, CO-44D, CO-46D, CO-47D, CO-48D, CO-49D and CO-53D on the D-Board.
2. Remove 7 screws Ⓒ and remove the D-Board as shown in Figure 4.

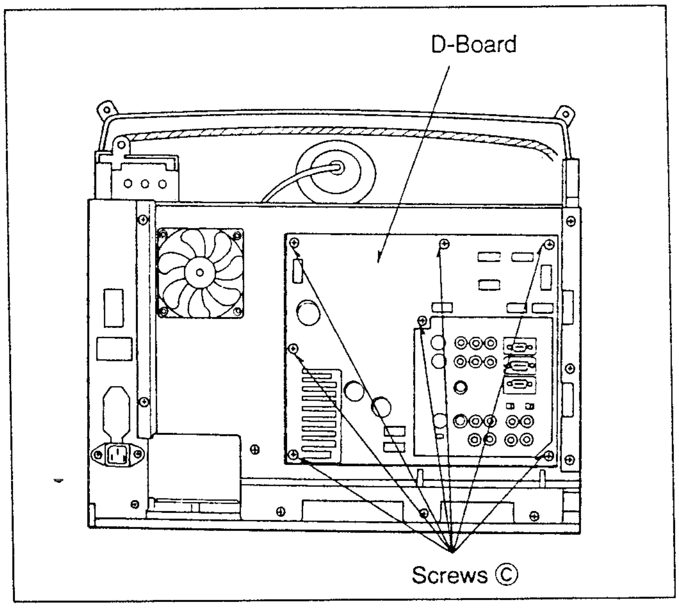


Figure 4

2-4. Removal of the D-Board Holder

1. Disconnect connectors CO-15B and CO-16B on the B-Board.
2. Remove 11 screws Ⓓ and remove the D-Board Holder as shown in Figure 5.

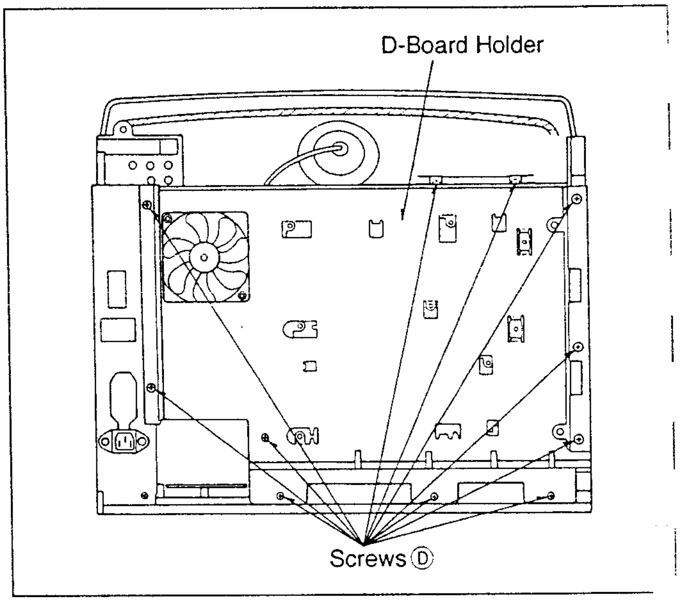

D-Board Holder
Screws Ⓓ

Figure 5

2-5. Removal of the N-Board Shield Case

1. Remove 8 screws Ⓔ and remove the 4 Ground Straps as shown in Figure 6.
2. Disconnect connectors CO-49N, CO-53N, CO-56N, CO-57N, CO-58N and CO-59N on the N-Board.

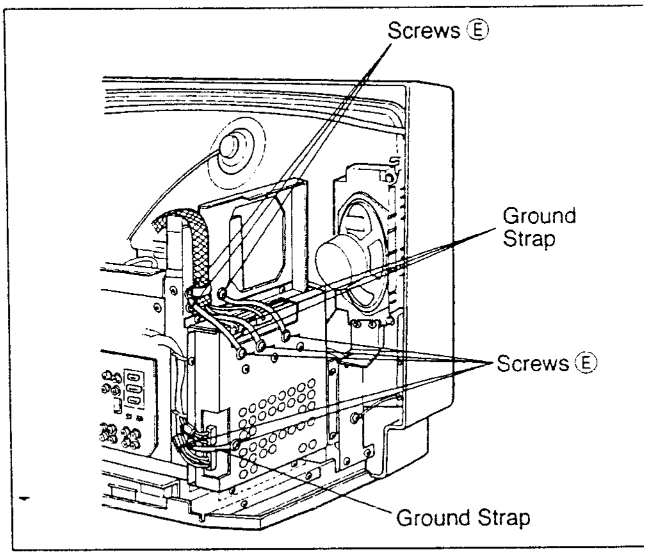

Screws Ⓔ
Ground Strap
Screws Ⓔ
Ground Strap

Figure 6

3. Remove 3 screws Ⓕ, 5 screws Ⓖ and remove the N-Board Shield Case, as shown in Figure 7.

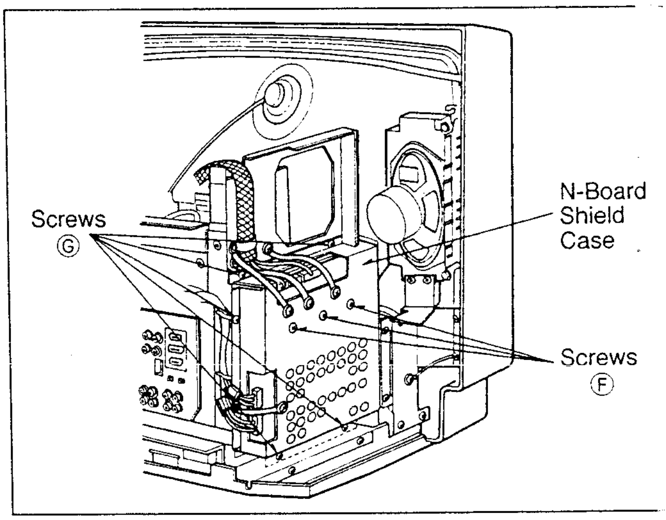

Screws Ⓖ
N-Board Shield Case
Screws Ⓕ

Figure 7

2-6. Removal of the N-Board

1. Disconnect connectors CO-06N, CO-50N, CO-51N, CO-52N, CO-54N and CO-55N on the N-Board.
2. Remove 6 screws Ⓗ and remove the N-Board as shown in Figure 8.

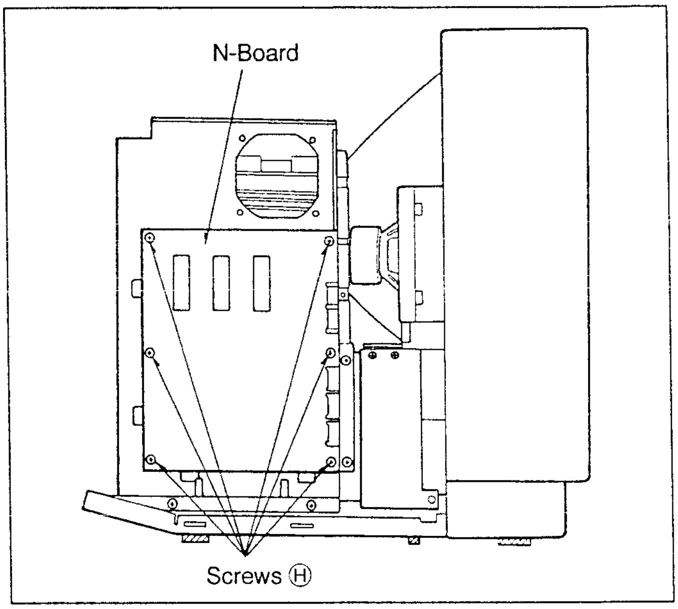


Figure 8

2-7. Removal of the C-Board

1. Pull out the C-Board in the direction indicated by the arrow as shown in Figure 9.
2. Disconnect connectors CO-17C, CO-56C, CO-57C, CO-58C, CO-59C, CO-62C, CO-63C, CO-65C and CO-66C on the C-Board.
3. Open the CRT socket cover and unsolder the lead wire (FOCUS LEAD).

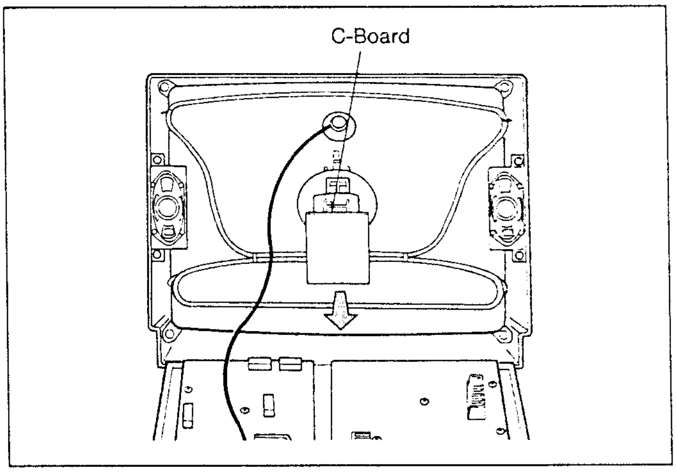


Figure 9

2-8. Open the Power Supply Ass'y

1. Remove 9 screws Ⓘ and open the derection indicated by the arrow as shown in Figure 10.

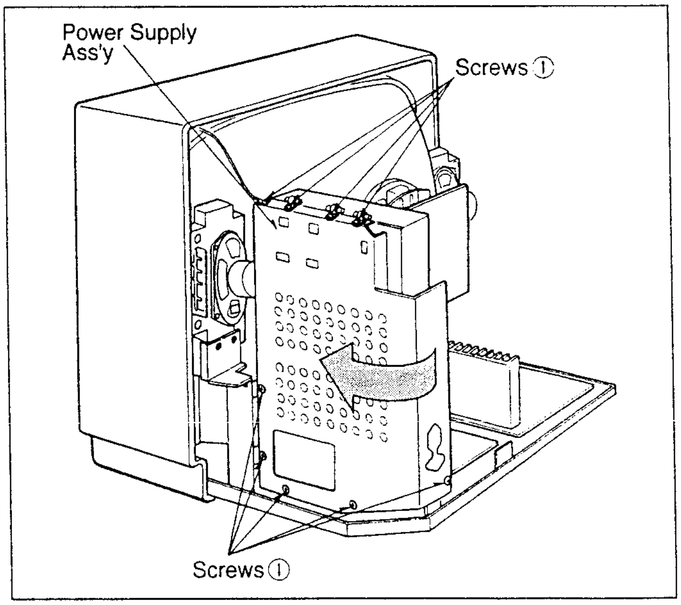


Figure 10

2-9. Removal of the B-Board Shield Case

1. Disconnect connectors CO-05B, CO-11B, CO-12B, CO-13B, CO-14B, CO-15B, CO-17B, CO-48B, CO-50B and CO-91B on the B-Board.
2. Remove 5 screws Ⓙ and remove the B-Board Shield Case as shown in Figure 11.
3. Remove the Power Supply Ass'y.

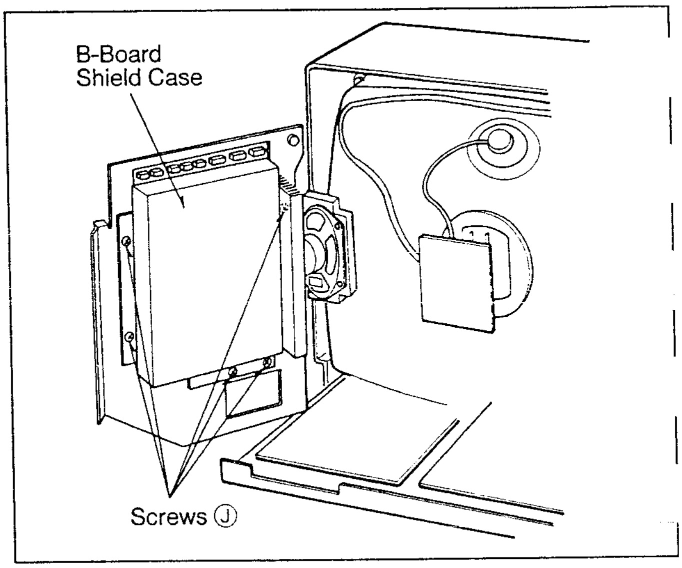

B-Board Shield Case
Screws Ⓙ

Figure 11

2-10. Removal of the B-Board

1. Remove 6 screws Ⓚ, 6 screws Ⓛ and remove the B-Board as shown in Figure 12.

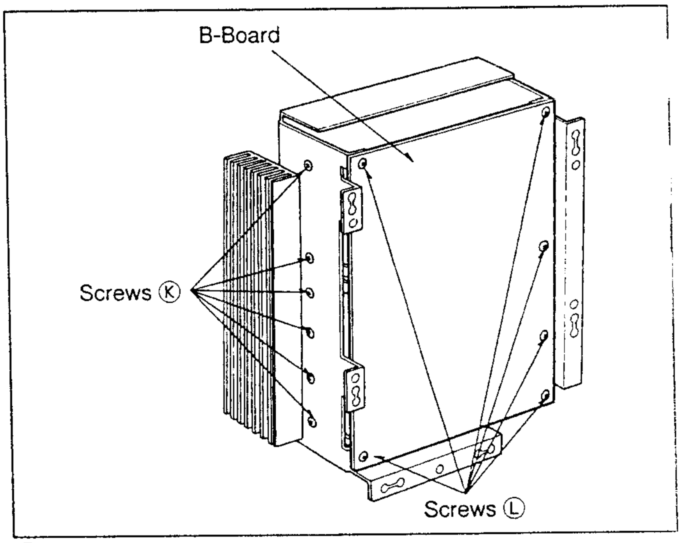

B-Board
Screws Ⓚ
Screws Ⓛ

Figure 12

2-11. Removal of the N-Board Holder

1. Remove 5 screws Ⓜ and remove the N-Board Holder as shown in Figure 13.

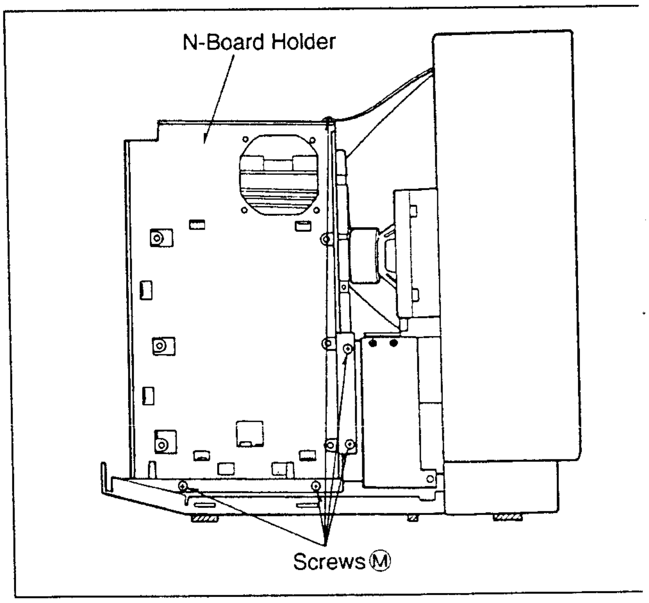

N-Board Holder
Screws Ⓜ

Figure 13

2-12. Removal of the H-Board

1. Disconnect connectors CO-08A on the A-Board.
2. Discharge the remaining static electricity by shorting between anode and the CRT frame ground.
3. Disconnect the anode spring from the CRT.
4. Remove 8 screws Ⓝ and remove the H-Board as shown in Figure 14.

Caution: When servicing or replacing the CRT, disconnect the anode and discharge the anode completely, as high voltage (29 kV) may remain on the anode for an extended time after power off.

2-13. Removal of the A-Board

1. Disconnect connectors DY (H) and DY (V) on the A-Board.
2. Remove 8 screws Ⓞ and remove the A-Board as shown in Figure 14.

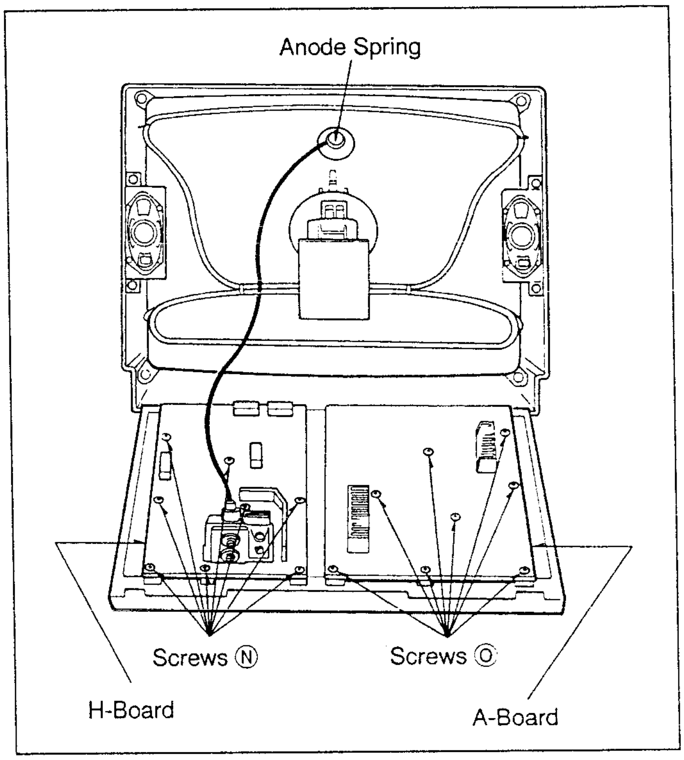


Figure 14

2-14. Removal of the Speakers (L)/(R)

1. Remove 4 screws Ⓟ on the Speaker Holders.
2. Remove 4 screws Ⓠ and Speakers (L)/(R) in the indicated by the arrow as shown in Figure 15.

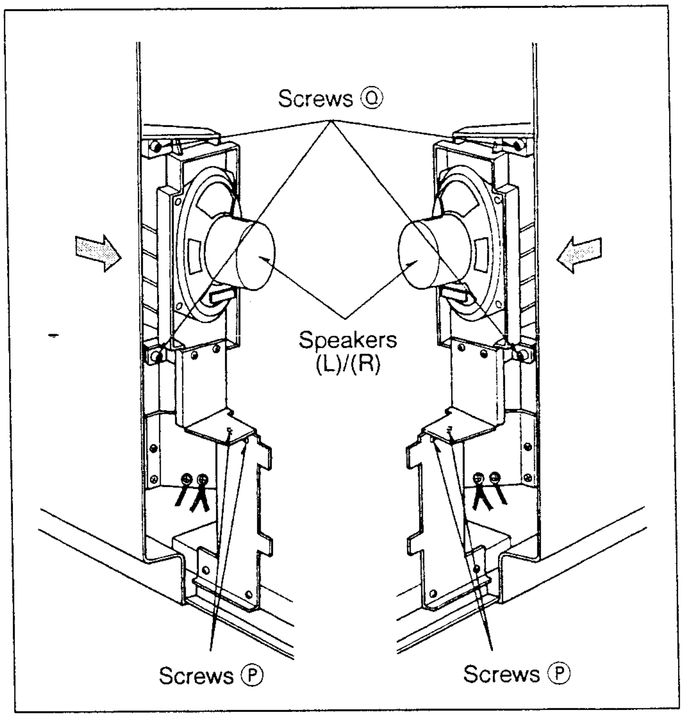


Figure 15

2-15. Removal of the Main Frame

1. Remove 5 screws Ⓡ and remove the Ground Lugs as shown in Figure 16.
2. Remove 8 screws Ⓢ and remove the Side Angles (L)/(R) as shown in Figure 16.

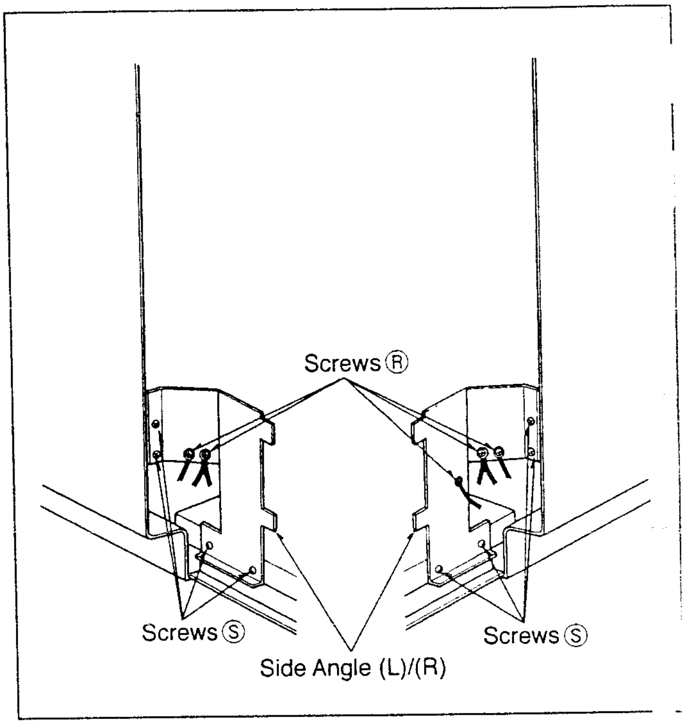

Screws Ⓡ
Screws Ⓢ
Screws Ⓢ
Side Angle (L)/(R)

Figure 16

3. Remove 2 screws Ⓣ and 3 screws Ⓤ on the Front Cabinet as shown in Figure 17.
4. Remove the Main Frame.

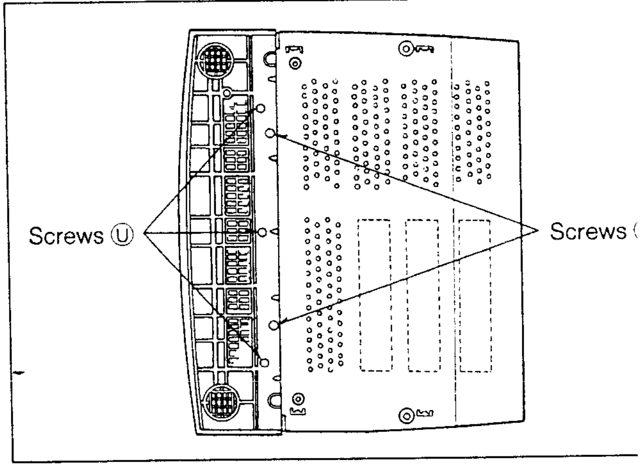

Screws Ⓤ
Screws (

Figure 17

2-16. Removal of the Power Switch

1. Remove 2 screws Ⓥ and remove the Power Switch as shown in Figure 18.

2-17. Removal of the F-Board

1. Remove 8 screws Ⓦ and remove the F-Board as shown in Figure 18.

2-18. Removal of the E-Board

1. Remove 6 screws Ⓧ and remove the E-Board as shown in Figure 18.

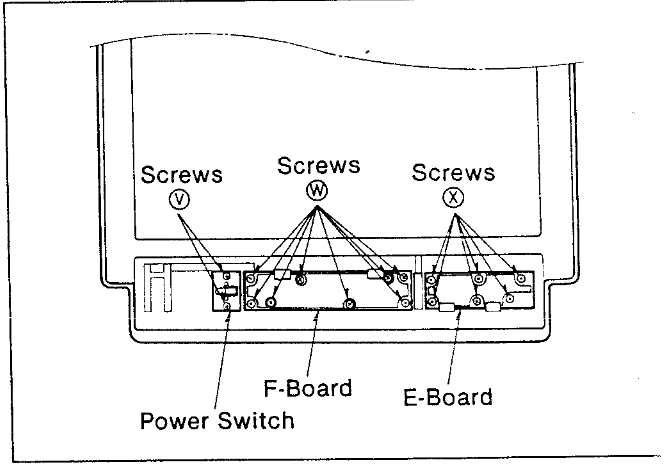

Screws Ⓥ
Screws Ⓦ
Screws Ⓧ
F-Board
E-Board
Power Switch

Figure 18

2-19. Removal of the Picture Tube

1. Remove 4 screws Ⓨ and remove the Picture Tube as shown in Figure 19.

Caution: Do not lift the Picture Tube by the neck.

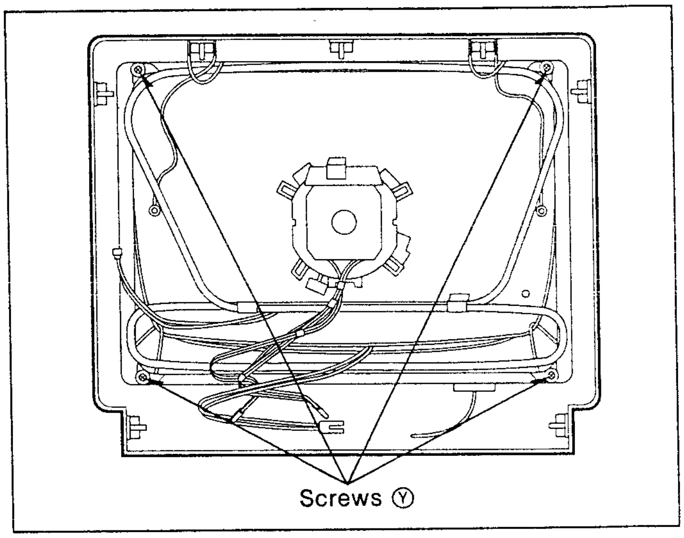
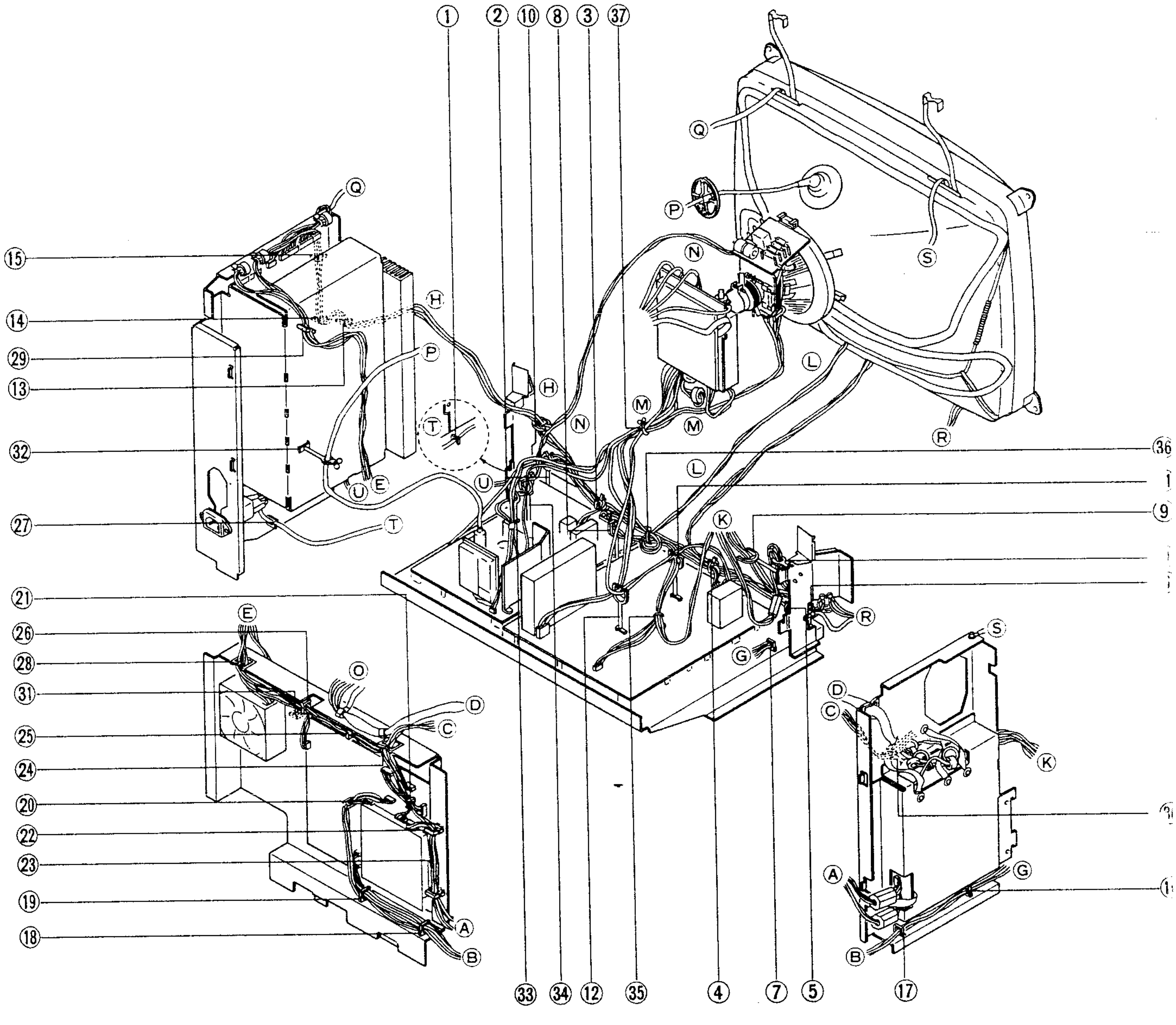


Figure 19

CLAMPING AND WIRING POSITIONS OF INTERNAL LEADS


①
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Clamper	Clamp Lead
①	One cable: AC SW
②	Three cables: CO-10D, CO-55HN, AC SW
③	Five cables: CO-05AB, CO-10D, CO-50BN, CO-55HN, CO-91HB
④	Seven cables: CO-05AB, CO-10D, CO-31FX, CO-32FX, CO-33FX, CO-50BN, CO-55HN
⑤	Eight cables: CO-06AN, CO-31FX, CO-32FX, CO-33FX, CO-44AD, CO-50BN, CO-55HN, CO-71EX
⑥	Four cables: CO-09D, CO-10D, CO-46ED, CO-47ED
⑦	Five cables: CO-09D, CO-10D, CO-44AD, CO-46ED, CO-47ED
⑧	Two cables: CO-08HA, CO-21HX
⑨	One cable: CO-54EN
⑨'	Nine cables: CO-06AN, CO-31FX, CO-32FX, CO-33FX, CO-50BN, CO-51NX, CO-52NX, CO-55HN, CO-71EX
⑩	Three cables: CO-05AB, CO-50BN, CO-91HB
⑪	Two cables or leads: CO-08HA, CO-21HX, DY
⑫	Six leads from DY
⑬	Three cables: CO-05AB, CO-50BN, CO-91HB
⑭	Three cables: CO-05AB, CO-50BN, CO-91HB
⑮	Three cables: CO-05AB, CO-50BN, CO-91HB
⑯	Five cables: CO-09D, CO-10D, CO-44AD, CO-46ED, CO-47ED
⑰	Five cables: CO-09D, CO-10D, CO-44AD, CO-46ED, CO-47ED
⑱	Five cables: CO-09D, CO-10D, CO-44AD, CO-46ED, CO-47ED
⑲	Five cables: CO-09D, CO-10D, CO-44AD, CO-46ED, CO-47ED
⑳	Two cables: CO-46ED, CO-47ED
㉑	Three cables: CO-42DX, CO-43DX, CO-49DN
㉒	Two cables: CO-49DN, CO-53DN
㉓	Two cables: CO-49DN, CO-53DN
㉔	Four cables: CO-11BX, CO-41DX, CO-42DX, CO-43DX
㉕	One cable: CO-11BX
㉖	Two cables: CO-11BX, CO-48BD
㉗	One cable: AC SW
㉘	Three cables: CO-11BX, CO-15B, CO-48BD
㉙	Four cables: CO-11BX, CO-15B, CO-17BC, CO-48BD
㉚	Four cables: CO-11BX, CO-41DX, CO-42DX, CO-43DX
㉛	One cable: CO-17BC
㉜	Anode lead from FBT
㉝	Two leads from FBT
㉞	Two leads from FBT or Degaussing Coil
㉟	Two cables: CO-08AB, CO-21HX
㊱	• Two cables: CO-08AB, CO-21HX • Two leads from CRT
㊲	• Two cables: CO-66HC, CO-17BC • Two leads from CRT or FBT

Note: The end one letter or two letters of the connector name mean the board name.
For example
Three cables: CO-10D, CO-55HN, AC SW
↓
Cable from D-Board/CO-10D, Cable between H-Board/CO-55H and N-Board/CO-55N, Cable from AC SW.

ADJUSTMENTS

STANDBY +B VOLTAGE

1. Apply a VGA3 (640×480, 31kHz/60Hz) mode signal with crosshatch pattern to the unit.
2. Supply 120 V AC to the unit.
3. Connect an AC voltmeter between pin 1 of CO-17B and ground.
4. Adjust R823 on the B-Board so that the voltage becomes 6.3 ±0.15 Vrms.

Confirmation

5. Connect a digital multimeter (voltmeter) to 5V line (pin 1 of CO-11B), and confirm that the voltage is 5 ±0.25 V.
6. Connect the digital multimeter to 12V line (pin 10 of CO-05B), and confirm that the voltage is 12 ±0.3 V.
7. Open-circuit the V. Sync. input terminal (the unit changes into suspended state).
8. Connect the AC voltmeter between pin 1 of CO-17B and ground, and confirm that the voltage is 4.3 ±0.3 Vrms.

+B VOLTAGE

1. Apply a VGA3 (640×480, 31kHz/60Hz) mode signal with crosshatch pattern to the unit.
2. Turn ON the unit.
3. Connect a digital multimeter (voltmeter) to 175V line (pin 1 of CO-50N).
4. Adjust R876 on the B-Board so that the voltage becomes 175 ±0.5 V.

Confirmation

5. Connect the digital multimeter to 260V line (pin 1 of CO-91B), and confirm that the voltage is 253 ±3 V.
6. Connect the digital multimeter to 160V line (pin 3 of CO-91B), and confirm that the voltage is 170 ±3 V.
7. Connect the digital multimeter to 125V line (pin 3 of CO-05B), and confirm that the voltage is 120 ±3 V.
8. Connect the digital multimeter to 32V line (pin 5 of CO-05B), and confirm that the voltage is 32 ±2 V.
9. Connect the digital multimeter to 26V line (pin 3 of CO-48B), and confirm that the voltage is 26 ±2 V.
10. Connect the digital multimeter to 15V line (pin 1 of CO-48B), and confirm that the voltage is 15 ±1 V.

HIGH VOLTAGE

1. Apply a VGA3 (640×480, 31kHz/60Hz) mode signal with black-out to the unit.
2. Turn Screen control (on the FBT) fully counterclockwise.
3. Turn R936 on the H-Board fully counterclockwise.
4. Connect a high-voltage meter to an anode of the CRT.
5. Adjust R919 on the H-Board so that the High Voltage becomes 28.5 ±0.1 kV.
6. Adjust R936 so that the High Voltage becomes 29.0 ±0.1 kV.

Note: After adjusting, fix the variable resistors with silicone.

ABL

1. Apply a VGA3 (640×480, 31kHz/60Hz) mode signal wi white-out to the unit.
2. Connect a digital multimeter (voltmeter) between TP902 (positive side) and TP903 (negative side).
3. Adjust R7012 on the N-Board so that the voltage becom 4.8 ±0.1 Vdc.

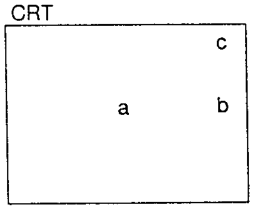
RASTER BRIGHTNESS

1. Apply a VGA3 (640×480, 31kHz/60Hz) mode signal with white-out to the unit.
2. Set Brightness to the maximum and Contrast to tl maximum.
3. Confirm H/V sizes as below:
   H = 500 mm (19.7")
   V = 375 mm (14.8")
4. Apply a VGA3 (640×480, 31kHz/60Hz) mode signal with black-out to the unit.
5. Adjust the back raster to 0.55 ±0.05 ft-L brightness Screen control (on the FBT).

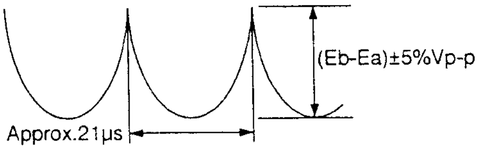
Note: 1.0 ft-L = 3.4 nit (cd/m²)

DYNAMIC FOCUS WAVEFORM

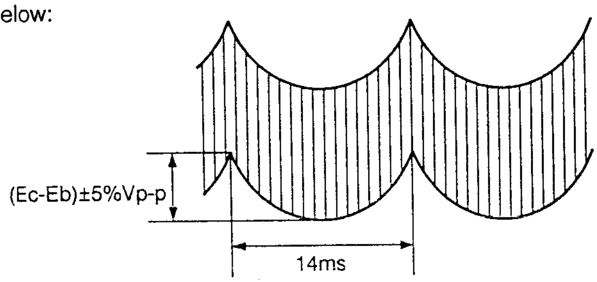
1. Apply an SVGA (800×600, 48kHz/72Hz) mode signal with the crosshatch pattern to the unit.
2. Connect a high-voltage meter to Focus plug on the C socket.
3. Disconnect connector CO-92H on the H-Board.
4. Turn ON the unit.
5. Set Brightness to the center and Contrast to the maximum.
6. Measure the best focus voltage on three points of the CRT screen indicated in the following figure by rotating the foc control of FBT.
   The best focus voltage on Point a, Point b and Point c is defined Ea, Eb and Ec.



7. Connect connector CO-92H on the H-Board.
8. Disconnect the high-voltage meter.
9. Connect an oscilloscope to TP1901 on the H-Board.
10. Turn R1927 (on the H-Board) fully clockwise.
11. Adjust R1926 so that the waveform (H range) becomes below:



12. Adjust R1927 so that the waveform (V range) becomes as below:



FOCUS

1. Apply an SVGA (800×600, 48kHz/72Hz) mode signal with crosshatch pattern to the unit.
2. Set Brightness to the center and Contrast to the maximum.
3. Adjust Focus control (on the FBT) so that horizontal lines on the screen are focussed.
4. Adjust R7401 on the C-Board so that vertical lines on the screen are focussed.

Confirmation

5. Apply an SVGA (800×600, 48kHz/72Hz) mode signal with characters pattern to the unit, and confirm that all characters in the screen are focused.

SIDE-PINCUSHION

1. Apply an SVGA (800×600, 48kHz/72Hz) mode signal with crosshatch pattern to the unit.
2. Adjust Side-Pincushion Control so that proper shape of image sides (distortion level is less than ±3 mm).

VERTICAL SIZE

1. Apply an SVGA (800×600, 48kHz/72Hz) mode signal with crosshatch pattern to the unit.
2. Adjust Vertical Size Control so that the image height becomes 375 mm (14.8").

HORIZONTAL SIZE

1. Apply an SVGA (800×600, 48kHz/72Hz) mode signal with crosshatch pattern to the unit.
2. Adjust Horizontal Size Control so that the image width becomes 500 mm (19.7").

HORIZONTAL CENTERING

1. Apply an SVGA (800×600, 48kHz/72Hz) mode signal with crosshatch pattern to the unit.
2. Adjust Horizontal Centering Control so that the image is positioned into horizontal center.

VERTICAL CENTERING

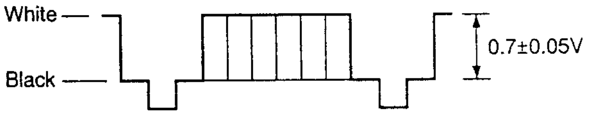
1. Apply an SVGA (800×600, 48kHz/72Hz) mode signal with crosshatch pattern to the unit.
2. Adjust Vertical Centering Control so that the image is positioned into vertical center.

VERTICAL LINEARITY

1. Apply an SVGA (800×600, 48kHz/72Hz) mode signal with crosshatch pattern to the unit.
2. Adjust R446 on the A-Board so that spaces between vertical lines are the same at upper and lower sides.
3. Apply a VGA3 (640×480, 31kHz/60Hz) mode signal with crosshatch pattern to the unit.
4. Adjust R465 on the A-Board so that spaces between vertical lines are the same at upper and lower sides.
5. Apply a PAL composite video signal with crosshatch pattern to the unit.
6. Adjust R466 on the A-Board so that spaces between vertical lines are the same at upper and lower sides.

VIDEO OUTPUT LEVEL

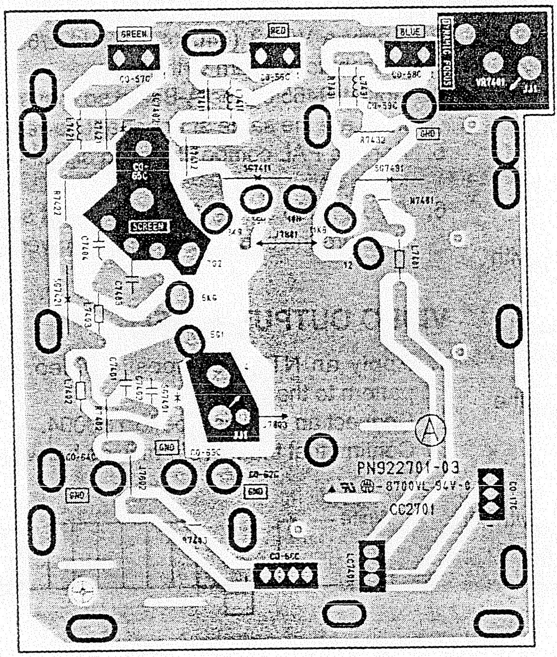
1. Apply an NTSC composite video signal with color bar pattern to the unit.
2. Connect an oscilloscope to TP3004.
3. Confirm that the waveform is as below:



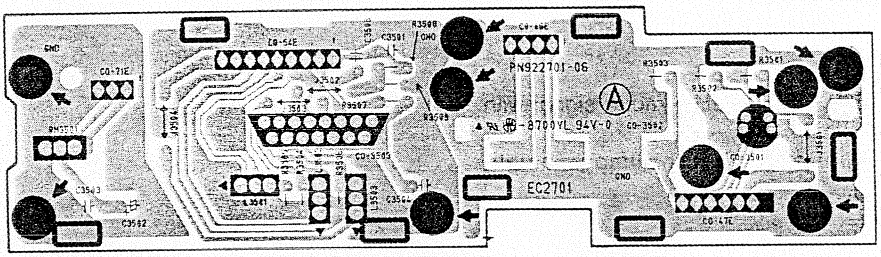
4. If a potential difference between black and white levels is out of 0.7 ±0.05 V, adjust VR3301 so that the difference within tolerance.

CIRCUIT BOARDS

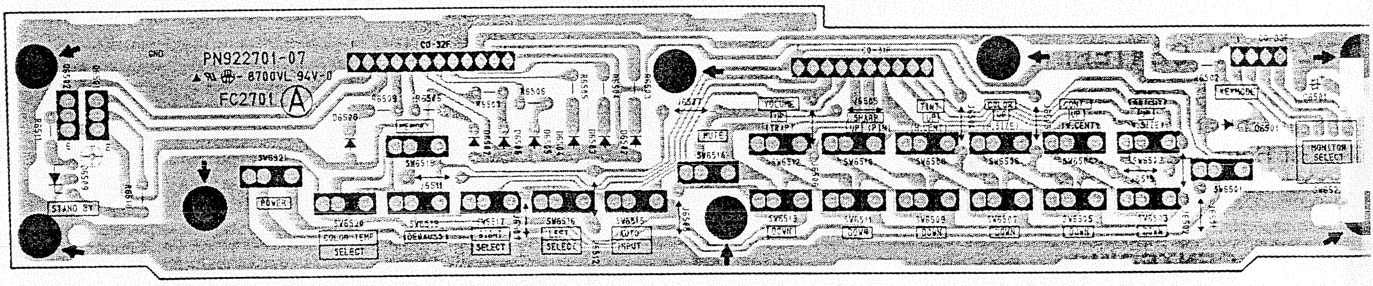
C-Board


GREEN
RED
BLUE
DYNAMIC FOCUS
VR7401
SCREEN
GND
PN922701-03
▲-8700VL 94V-0
CC2701

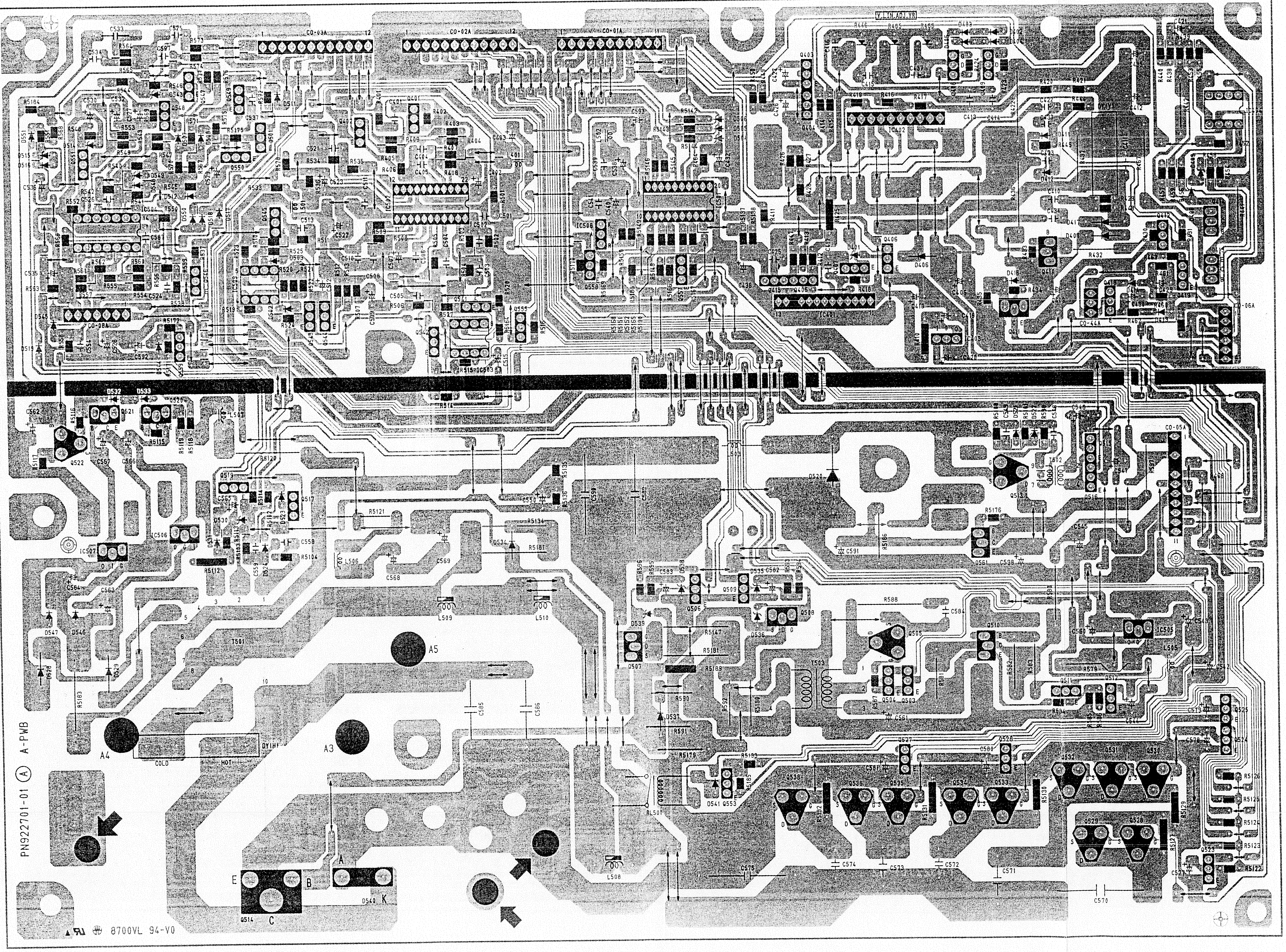
E-Board


GND
PN922701-06
▲-8700VL 94V-0
EC2701

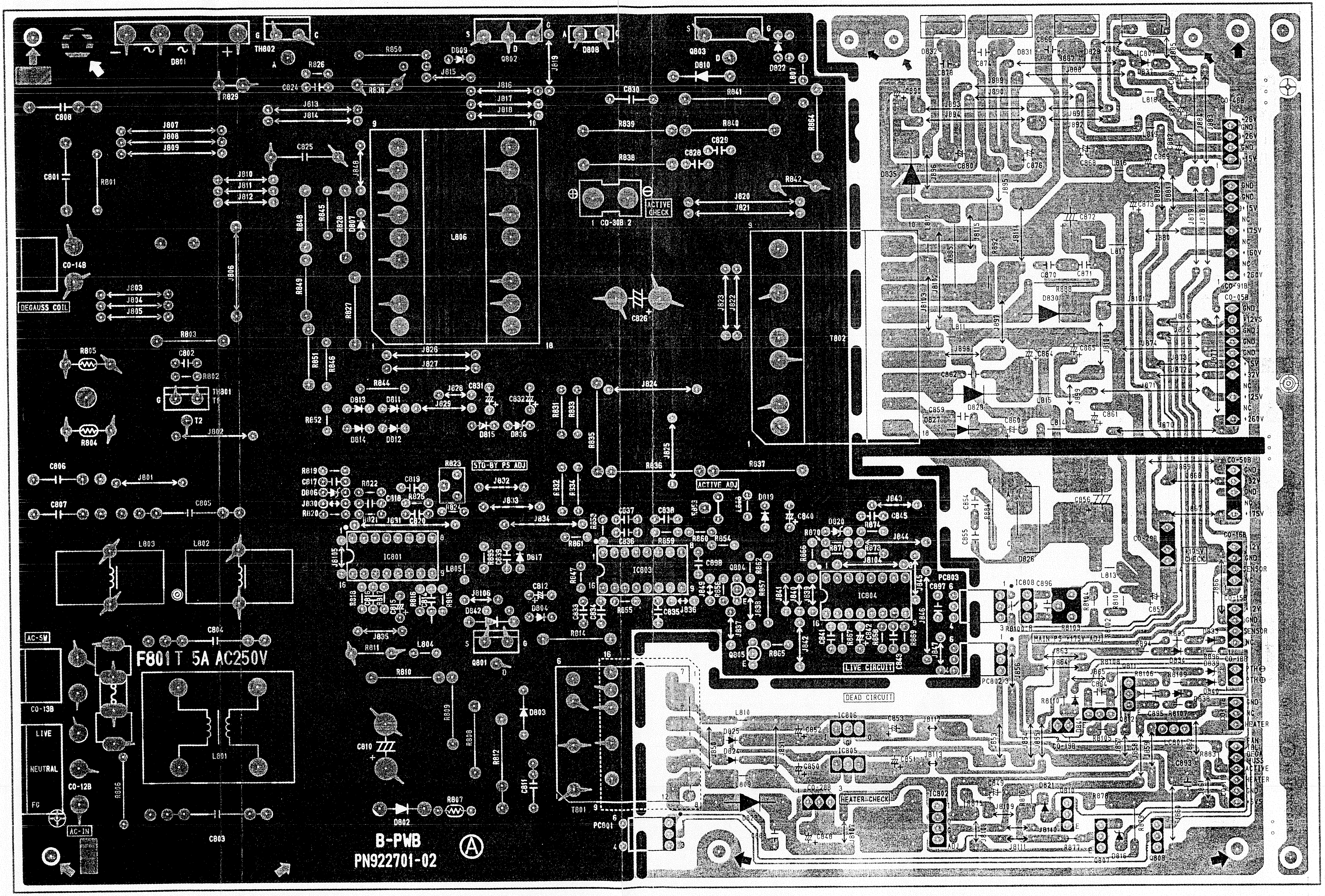
F-Board


GND
PN922701-07
▲-8700VL 94V-0
FC2701
STAND BY
POWER
COLOR TEMP
SELECT
DEGAUSS
VOLUME
MUTE
SHARP
TINT
COLOR
DOWN
AUTO
INPUT
KEYMODE
MONITOR SELECT

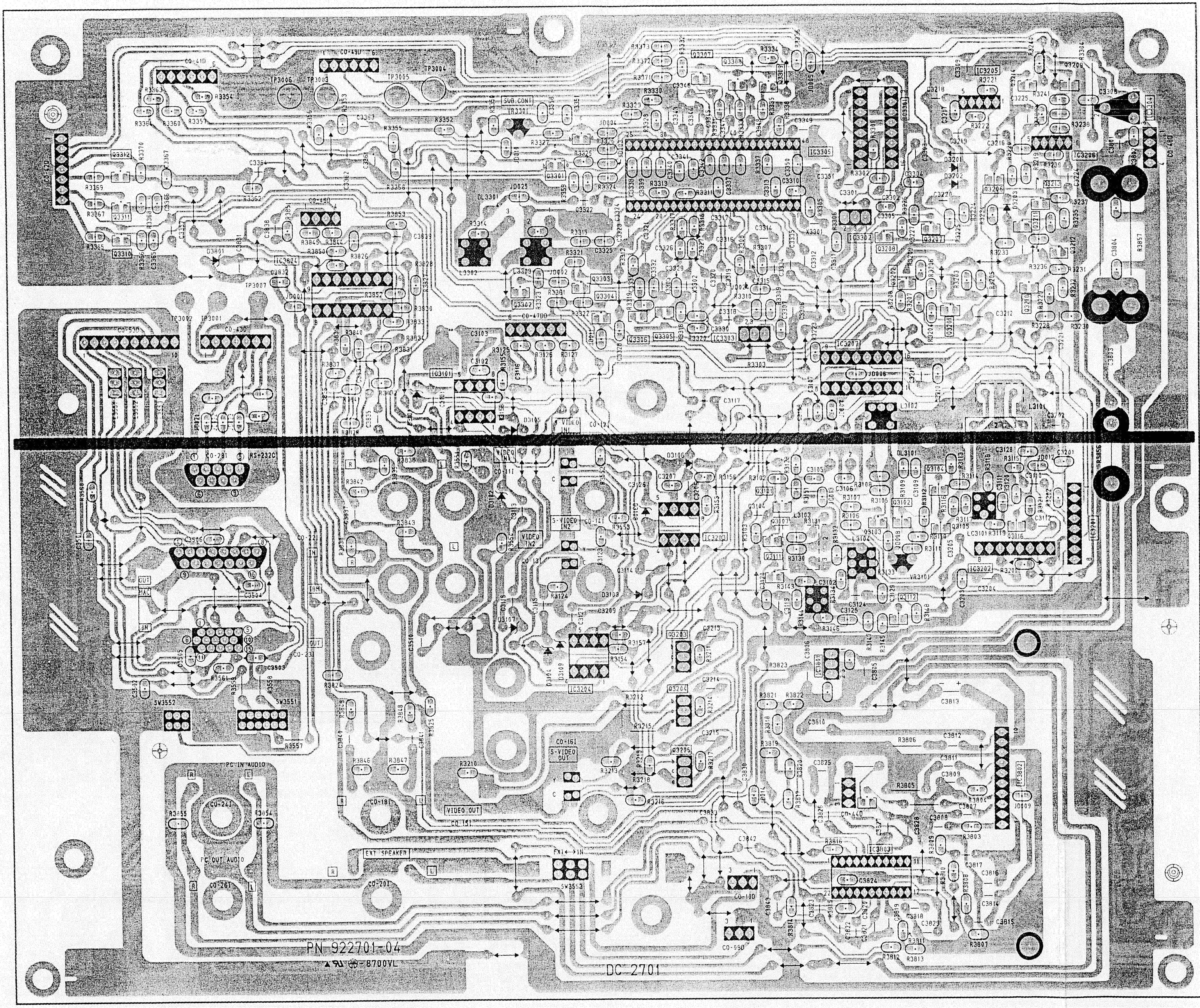
A-Board


CO-03A
CO-02A
CO-01A
CO-08A
CO-06A
CO-05A
CO-44A
V.LIN.ADJ.VR
IC402
IC401
IC405
IC501
IC502
IC503
IC504
IC505
IC506
IC507
T501
T502
T503
L506
L508
L509
L510
RL501
A3
A4
A5
HOT
COLD
DY(H)
Q514
Q540
E
B
C
A
K
PN922701-01 Ⓐ A-PWB
8700VL 94-V0

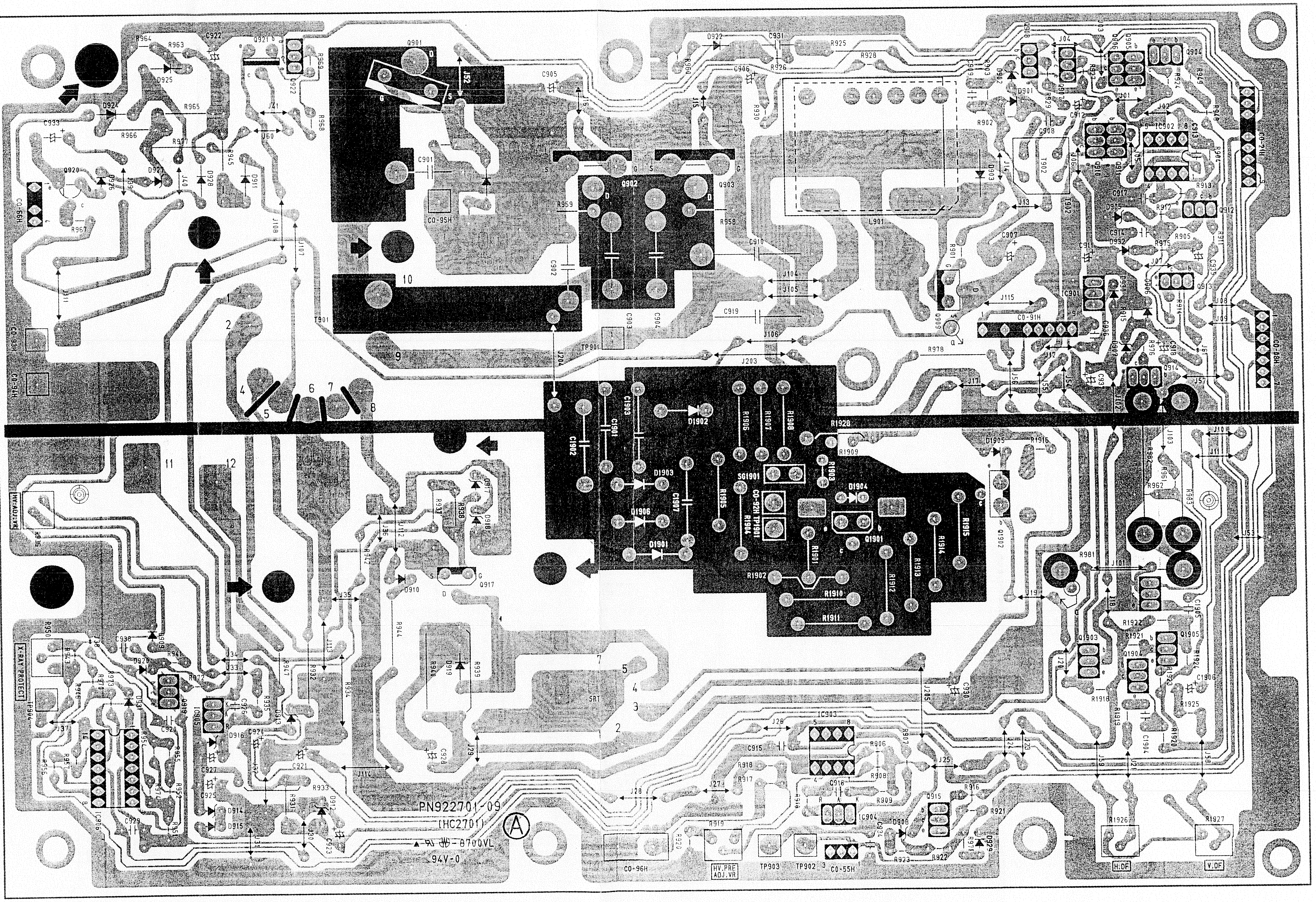
B-Board


B-PWB
PN922701-02
F801 T 5A AC250V
DEGAUSS COIL
AC-5W
CO-13B
LIVE
NEUTRAL
FG
CO-12B
AC-IN
CO-14B
D801
TH802
TH801
L803
L802
L801
L806
CO-30B
ACTIVE CHECK
STD-BY PS ADJ
ACTIVE ADJ
IC801
IC803
IC804
LIVE CIRCUIT
DEAD CIRCUIT
HEATER CHECK
MAIN PS +125V ADJ
+125V CHECK
T801
T802
PC801
PC802
PC803
IC805
IC806
IC808
CO-91B
CO-05B
CO-50B
CO-16B
CO-15B
CO-18B
CO-19B
CO-28B
CO-29B
CO-48B

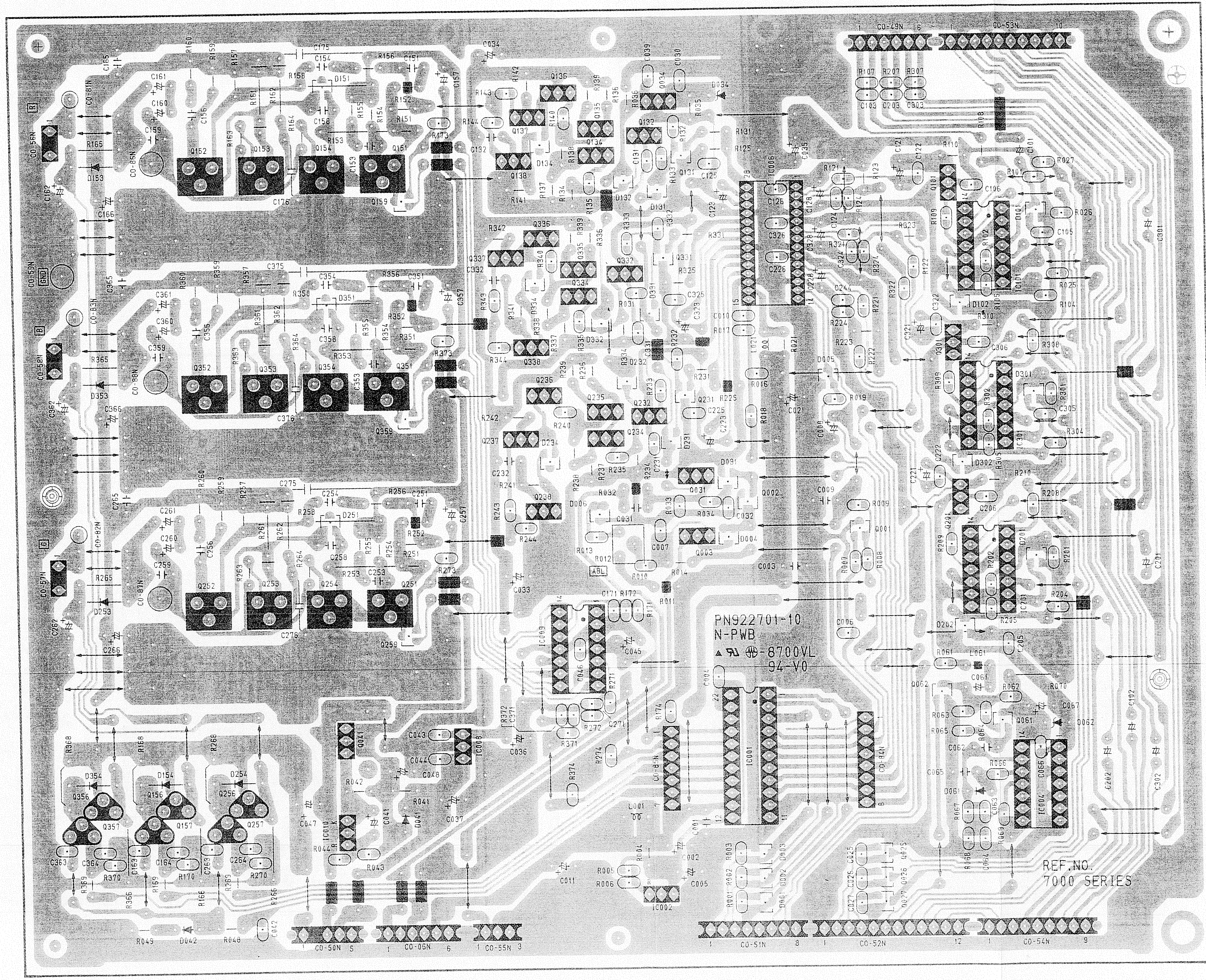
D-Board


PN 922701-04
DC 2701
8700VL
EXT SPEAKER
VIDEO OUT
S-VIDEO OUT
PC IN AUDIO
PC OUT AUDIO
RS-232C
SUB CONT
VIDEO IN1
VIDEO IN2
S-VIDEO IN2
EXT IN
CO-410
CO-490
CO-590
CO-430
CO-480
CO-281
CO-241
CO-261
CO-201
CO-181
CO-161
CO-100
CO-090
CO-440
CO-4700
SW3551
SW3552
SW3553
VR3301
VR3101
L3101
L3102
DL3101
DL3301
TP3001
TP3002
TP3003
TP3004
TP3005
TP3006
TP3007

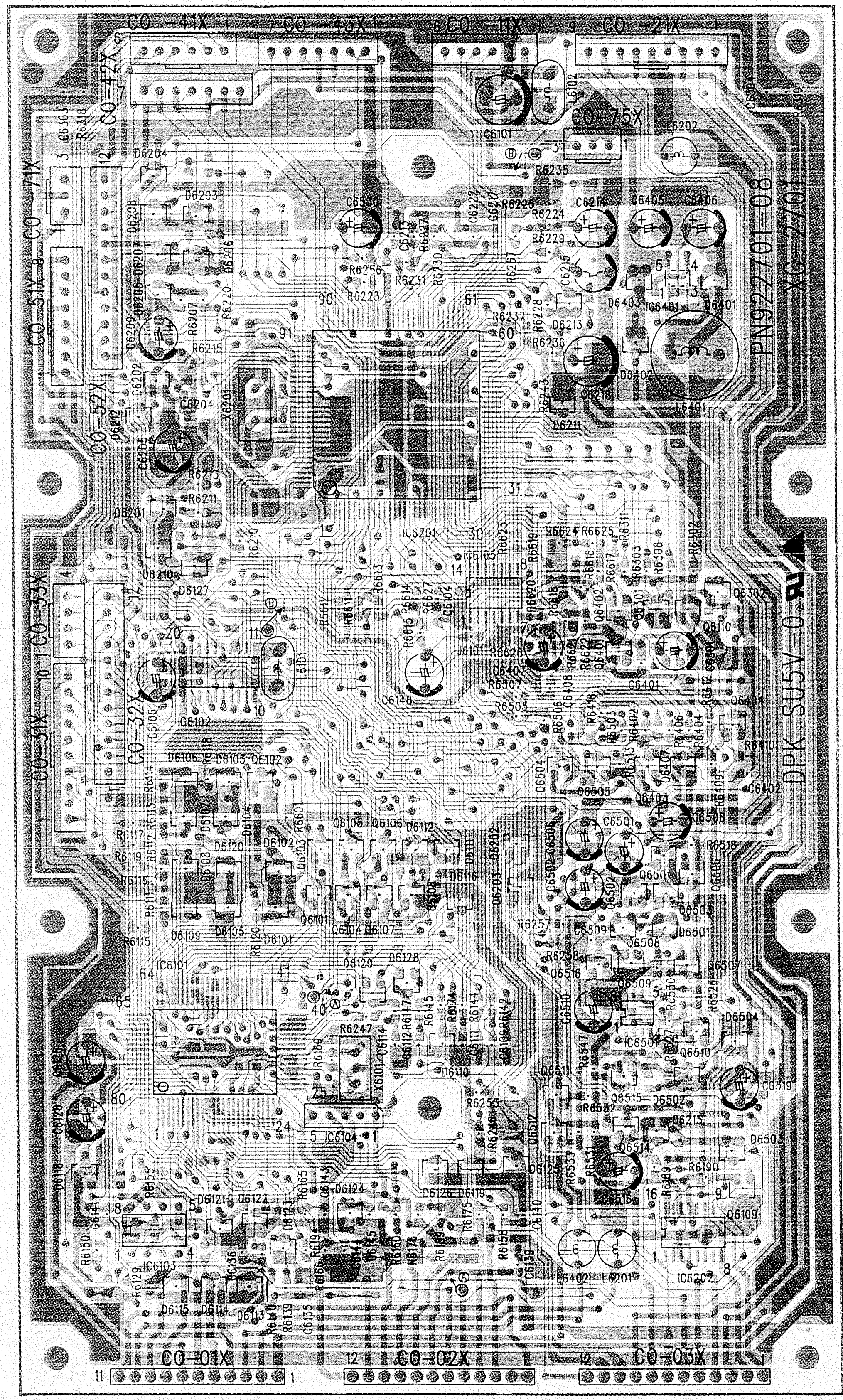
H-Board


PN922701-09
(HC2701)
94V-0
8700VL
X-RAY PROTECT
HV.ADJ.VR
HV.PRE ADJ.VR
H.DF
V.DF
TP901
TP902
TP903
TP904
CO-96H
CO-55H
CO-95H
CO-91H
CO-92H
CO-93H
CO-94H
CO-56H
CO-21H
CO-98H
T901
T902
L901
SRT
Q901
Q902
Q903
Q1901
Q1902
Q1903
Q1904
Q1905
IC901
IC902
IC903
IC904
IC905
SG1901
D1901
D1902
D1903
D1904
D1905
D1906
R1928

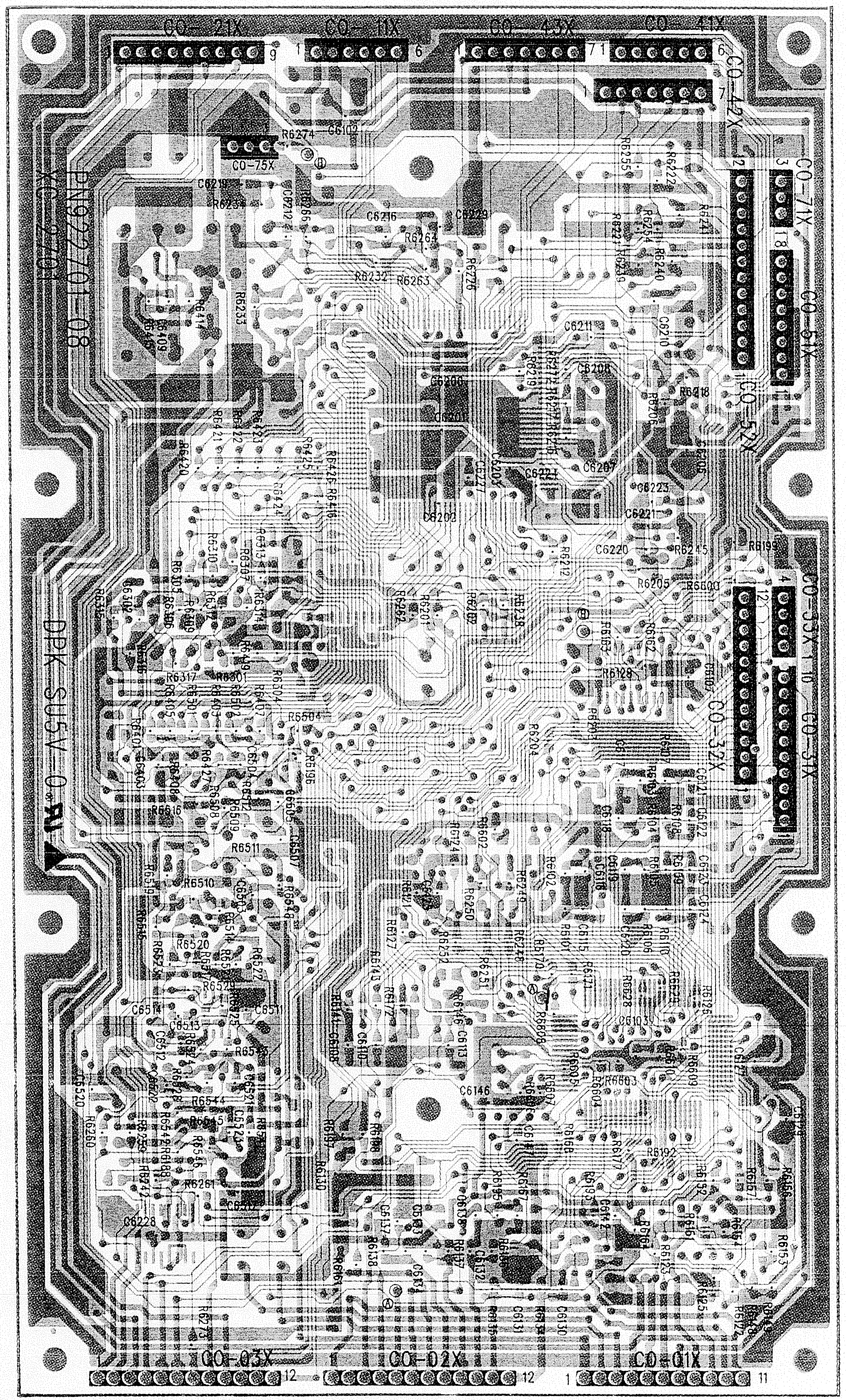
N-Board


PN922701-10
N-PWB
8700VL
94-V0
REF.NO.
7000 SERIES
CO-49N
CO-53N
CO-50N
CO-0GN
CO-55N
CO-51N
CO-52N
CO-54N
IC001
IC002
IC003
IC004
ABL

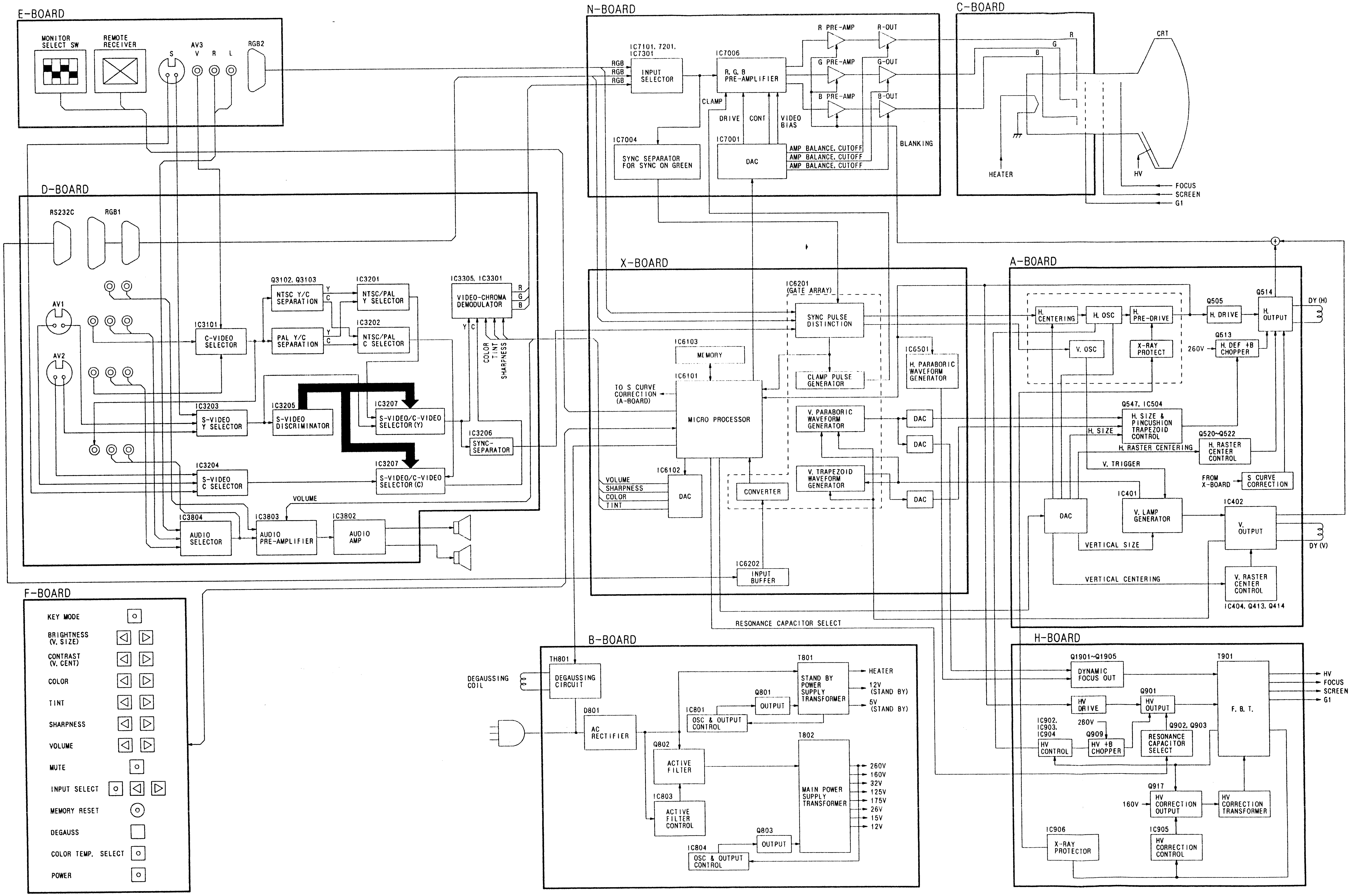
X-Board (Parts side)


CO-41X
CO-43X
CO-11X
CO-21X
CO-42X
CO-75X
CO-71X
CO-51X
CO-52X
CO-33X
CO-31X
CO-32X
CO-01X
CO-02X
CO-03X
PN922701-08
XC-2701
DPK SU5V-0

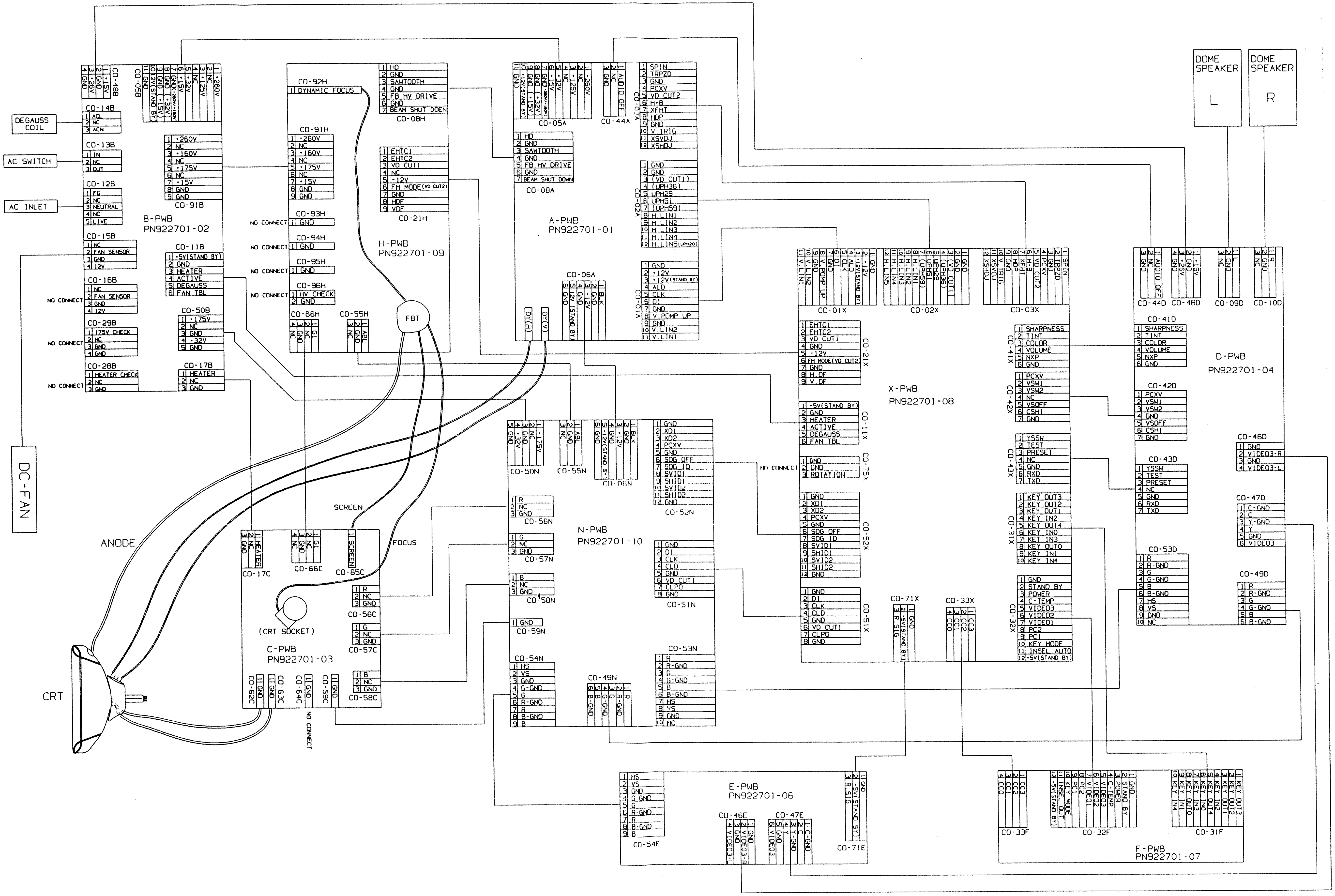
X-Board (Solder side)


CO-21X
CO-11X
CO-43X
CO-41X
CO-42X
CO-75X
CO-71X
CO-51X
CO-52X
CO-33X
CO-32X
CO-31X
CO-03X
CO-02X
CO-01X
PN922701-08
XC-2701
DPK SU5V-0

BLOCK DIAGRAM


E-BOARD
MONITOR SELECT SW
REMOTE RECEIVER
AV3
S
V
R
L
RGB2
D-BOARD
RS232C
RGB1
AV1
AV2
Q3102, Q3103
NTSC Y/C SEPARATION
PAL Y/C SEPARATION
IC3201
NTSC/PAL Y SELECTOR
IC3202
NTSC/PAL C SELECTOR
IC3101
C-VIDEO SELECTOR
IC3305, IC3301
VIDEO-CHROMA DEMODULATOR
R
G
B
Y
C
COLOR
TINT
SHARPNESS
IC3203
S-VIDEO Y SELECTOR
IC3205
S-VIDEO DISCRIMINATOR
IC3207
S-VIDEO/C-VIDEO SELECTOR (Y)
IC3206
SYNC-SEPARATOR
IC3204
S-VIDEO C SELECTOR
IC3207
S-VIDEO/C-VIDEO SELECTOR (C)
VOLUME
IC3804
AUDIO SELECTOR
IC3803
AUDIO PRE-AMPLIFIER
IC3802
AUDIO AMP
F-BOARD
KEY MODE
BRIGHTNESS (V. SIZE)
CONTRAST (V. CENT)
COLOR
TINT
SHARPNESS
VOLUME
MUTE
INPUT SELECT
MEMORY RESET
DEGAUSS
COLOR TEMP. SELECT
POWER
N-BOARD
IC7101, 7201, IC7301
RGB
RGB
RGB
INPUT SELECTOR
IC7006
R, G, B PRE-AMPLIFIER
R PRE-AMP
R-OUT
G PRE-AMP
G-OUT
B PRE-AMP
B-OUT
CLAMP
DRIVE
CONT
VIDEO BIAS
IC7004
SYNC SEPARATOR FOR SYNC ON GREEN
IC7001
DAC
AMP BALANCE, CUTOFF
AMP BALANCE, CUTOFF
AMP BALANCE, CUTOFF
BLANKING
C-BOARD
R
G
B
CRT
HEATER
HV
FOCUS
SCREEN
G1
X-BOARD
IC6201 (GATE ARRAY)
SYNC PULSE DISTINCTION
CLAMP PULSE GENERATOR
IC6103
MEMORY
IC6101
TO S CURVE CORRECTION (A-BOARD)
MICRO PROCESSOR
IC6501
H. PARABORIC WAVEFORM GENERATOR
V. PARABORIC WAVEFORM GENERATOR
V. TRAPEZOID WAVEFORM GENERATOR
DAC
DAC
DAC
IC6102
VOLUME
SHARPNESS
COLOR
TINT
DAC
CONVERTER
IC6202
INPUT BUFFER
RESONANCE CAPACITOR SELECT
A-BOARD
H. CENTERING
H. OSC
H. PRE-DRIVE
Q505
H. DRIVE
Q514
H. OUTPUT
DY (H)
V. OSC
X-RAY PROTECT
260V
Q513
H. DEF +B CHOPPER
Q547, IC504
H. SIZE
H. SIZE & PINCUSHION TRAPEZOID CONTROL
Q520~Q522
H. RASTER CENTERING
H. RASTER CENTER CONTROL
V. TRIGGER
FROM X-BOARD
S CURVE CORRECTION
IC401
V. LAMP GENERATOR
DAC
IC402
V. OUTPUT
DY (V)
VERTICAL SIZE
VERTICAL CENTERING
V. RASTER CENTER CONTROL
IC404, Q413, Q414
B-BOARD
TH801
DEGAUSSING COIL
DEGAUSSING CIRCUIT
D801
AC RECTIFIER
T801
STAND BY POWER SUPPLY TRANSFORMER
HEATER
12V (STAND BY)
5V (STAND BY)
Q801
OUTPUT
IC801
OSC & OUTPUT CONTROL
Q802
ACTIVE FILTER
IC803
ACTIVE FILTER CONTROL
T802
MAIN POWER SUPPLY TRANSFORMER
260V
160V
32V
125V
175V
26V
15V
12V
Q803
OUTPUT
IC804
OSC & OUTPUT CONTROL
H-BOARD
Q1901~Q1905
DYNAMIC FOCUS OUT
T901
F. B. T.
HV
FOCUS
SCREEN
G1
HV DRIVE
Q901
HV OUTPUT
IC902, IC903, IC904
HV CONTROL
260V
Q909
HV +B CHOPPER
Q902, Q903
RESONANCE CAPACITOR SELECT
Q917
160V
HV CORRECTION OUTPUT
HV CORRECTION TRANSFORMER
IC906
X-RAY PROTECTOR
IC905
HV CORRECTION CONTROL

WIRING DIAGRAM


DEGAUSS COIL
AC SWITCH
AC INLET
DC-FAN
CRT
ANODE
SCREEN
FOCUS
FBT
(CRT SOCKET)
DOME SPEAKER L
DOME SPEAKER R
NO CONNECT
B-PWB PN922701-02
H-PWB PN922701-09
A-PWB PN922701-01
X-PWB PN922701-08
D-PWB PN922701-04
C-PWB PN922701-03
N-PWB PN922701-10
E-PWB PN922701-06
F-PWB PN922701-07
CO-48B
CO-05B
CO-14B
CO-13B
CO-12B
CO-15B
CO-16B
CO-29B
CO-28B
CO-91B
CO-11B
CO-50B
CO-17B
CO-92H
1 DYNAMIC FOCUS
CO-91H
CO-93H
CO-94H
CO-95H
CO-96H
1 HV CHECK
CO-66H
CO-55H
CO-08H
1 HD
2 GND
3 SAWTOOTH
4 GND
5 FB HV DRIVE
6 GND
7 BEAM SHUT DOEN
CO-21H
1 EHTC1
2 EHTC2
3 VD CUT1
4 NC
5 -12V
6 FH MODE(VD CUT2)
7 GND
8 HDF
9 VDF
CO-05A
CO-44A
CO-03A
CO-08A
CO-02A
CO-06A
CO-01A
DY(H)
DY(V)
CO-01X
CO-02X
CO-03X
CO-21X
CO-11X
CO-75X
CO-52X
CO-51X
CO-41X
CO-42X
CO-43X
CO-31X
CO-32X
CO-71X
CO-33X
CO-44D
CO-48D
CO-09D
CO-10D
CO-41D
CO-42D
CO-43D
CO-53D
CO-46D
CO-47D
CO-49D
CO-17C
CO-66C
CO-65C
CO-56C
CO-57C
CO-58C
CO-62C
CO-63C
CO-64C
CO-59C
CO-50N
CO-55N
CO-06N
CO-52N
CO-56N
CO-57N
CO-58N
CO-59N
CO-51N
CO-54N
CO-49N
CO-53N
CO-54E
CO-46E
CO-47E
CO-71E
CO-33F
CO-32F
CO-31F
SHARPNESS
TINT
COLOR
VOLUME
NXP
PCXV
VSH1
VSH2
VSOFF
CSH1
YSSH
TEST
PRESET
RXD
TXD
KEY OUT3
KEY OUT2
KEY OUT1
KEY IN2
KEY OUT4
KEY IN0
KEY IN3
KEY OUT0
KEY IN1
KEY IN4
STAND BY
POWER
C-TEMP
VIDEO3
VIDEO2
VIDEO1
PC2
PC1
KEY MODE
INSEL AUTO
+5V(STAND BY)
SPIN
TRPZD
VD CUT2
H+B
XFHT
HDP
V.TRIG
XSVOJ
XSHOJ
UPH36
UPH29
UPH51
UPH59
H.LIN1
H.LIN2
H.LIN3
H.LIN4
H.LIN5
ALD
CLK
D1
V.POMP UP
V.LIN2
V.LIN1
XD1
XD2
SOG OFF
SOG ID
SVID1
SHID1
SVID2
SHID2
CLD
CLPO
ROTATION
HEATER
ACTIVE
DEGAUSS
FAN TBL
FAN SENSOR
175V CHECK
HEATER CHECK
AUDIO OFF
R-SIG
CC0
CC1
CC2
CC3
HS
VS
R-GND
G-GND
B-GND
C-GND
Y-GND
VIDEO3-R
VIDEO3-L
ABL
GL

SCHEMATIC DIAGRAM

IMPORTANT SAFETY NOTICE

THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION, FIRE AND ELECTRICAL SHOCK HAZARDS. WHEN SERVICING IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREAS OF THE SCHEMATIC.

NOTE:

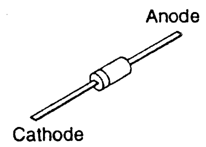
1. All resistors are carbon 1/4W resistor, unless otherwise noted with the following marks.
   Unit of resistance is OHM (Ω), (K=1,000, =M=1,000,000).

△ : Solid	-ᴡᴡ- : Thermistor
□ : SChip (1/8W)	⊗ : Fuse
○ : Non-flammable	☒ : Metal Oxide
⧄ : Cement	◎ : Metal Film

2. CAPACITOR
   All capacitors are ceramic 50V capacitor, unless otherwise noted with the following marks.
   Unit of capacitance is μF, unless otherwise noted.

⊣⊢ : Electrolytic	◎ : Ceramic (SL)	Ⓢ : Polystyrene	□ : Chip (SL)
(NP) : Bipolar	⊗ : Temp Compensation	☒ : Polypropylene	B : Chip (not SL)
Ⓣ : Tantalum	Ⓜ : Polyester	ⓜ : Metalized Polyester	

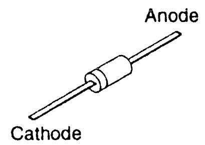
3. COIL
   Unit of inductance is μH.
4. TEST POINT
   ▼ : Test point position.
5. VOLTAGE MEASUREMENT
   Voltage is measured by a volt ohm meter with DC 20k OHM/V receiving crosshatch pattern of 800×600 (48kHz/72Hz) signal when all customer's controls are set to the standard condition.
   Brightness : without Back Raster level
   Contrast : max
   H. size : Approximately 500mm
   V. size : Approximately 375mm
6. When arrow mark (↗) is found, connection is easily found along with the direction of an arrow.
7. This schematic diagram is the latest at the time of printing and subject to changes without notice.



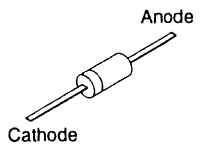
05NU42-TPA3
1SS178(TPA3)
D1NL20U-4070
D1NS4-4070
ERA37-10V3
MA165-(TA5)
MA167-(TA5)
MA170-(TA5)
MA27T-A(TA5)

RD2.2ESAB2-T1
RD2.4ESAB2-T1
RD3.3ESAB2-T1
RD5.1ESAB2-T1
RD5.6ESAB1-T1
RD5.6ESAB2-T1
RD5.6ESAB3-T1

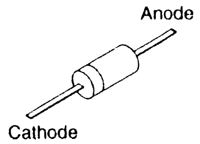
RD6.8ESAB3-T1
RD7.5ESAB2-T1
RD8.2ESAB2-T1
RD9.1ESAB2-T1
RD12ESAB1-T1
RD12ESAB2-T1
RD13ESAB2-T1
RD15ESAB2-T1
RD16ESAB1-T1
RD18ESAB2-T1
RD20ESAB1-T1
RD24ESAB2-T1
RD24ESAB4-T1
RD30ESAB1-T1



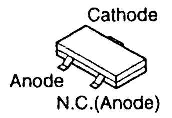
1NU41-LC6
TVSRGP10J
1SS83-TD
AG01AV2
EK16V0
EM1ZV1
EM2AV0
ERB44-08V3
MA2270



D3S4M
RL2ZLFB1
S2L60-04P15
S3L40-04P15

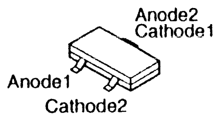


RG4ALF-L1

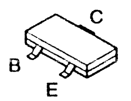


MA151K-(TX)
MA152K-(TX)
(MA152WK-(TX))

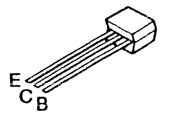
RD4.3MB1-T1B
RD4.7MB2-T1B
RD5.1MB3-T1B
RD5.6MB2-T1B



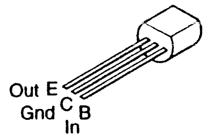
MA157A-(TX)



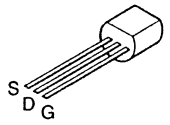
2SC3395-TB
2SC3398-TB
KSA812-D1L-R
KSC1623-C1L-R



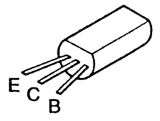
2SA933STP-S
2SA1348-AC
2SC1740STP-S
2SC3399-AC
2SC3402-AC



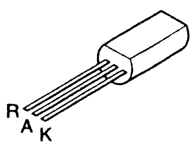
2SA1031C-TZ
2SC1317-R(TA)
2SC1473A
2SC1815NEW-GRTPE2
2SC2634-T(TA)
MPSA43C
NJM78L05A-T3
NJM78L09A-T3
NJM78L12A-T3



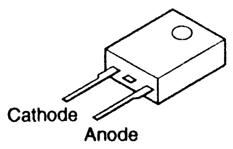
2SK614-(TA)



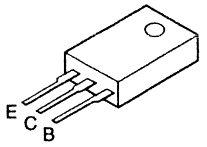
2SC3504E-AE
2SC3941-Q/R



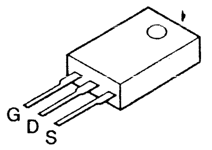
HA17431P-TZ



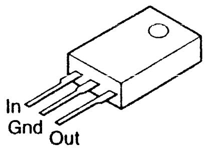
D8L60



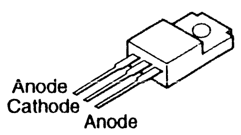
2SA1479E
2SA1480E
2SA1540E
2SC3789E
2SC3955E



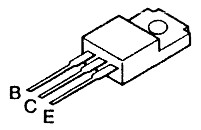
2SK1535



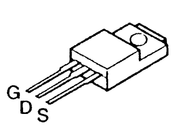
μPC78N12H
(AN78N12H)



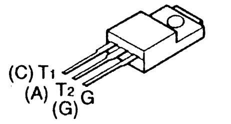
5DL2CZ47A



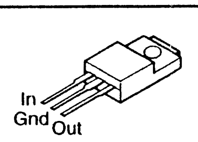
2SB940A-P
2SB1299-P
2SB1548A
2SB1548-P
2SC3946
2SC4710LS
2SD1264-P
2SD1446
2SD2374A
2SD2375



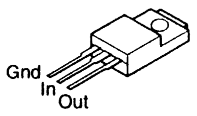
2SK1033
2SK1351
2SK1352
2SK1642



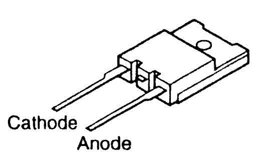
SM12JZ47A
(SF10JZ47)



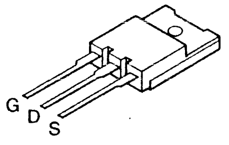
NJM7805FA
NJM7812FA
NJM78M05FA
NJM78M12FA
NJM78M24FA



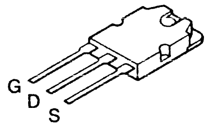
NJM7905FA



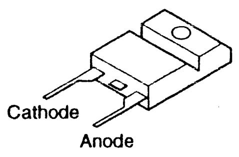
FMP-G5HS



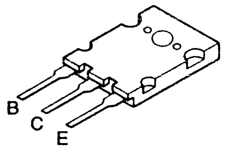
2SK1525
2SK1684



2SK1358
2SK1363



FMG-G3CS



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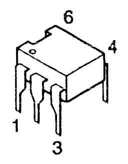

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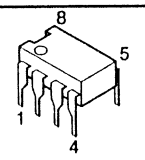
TLP634GR-LF2



BA10358
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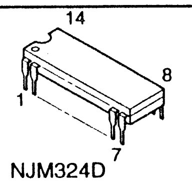
NJM2903D
NJM3404AD
S29355ADP



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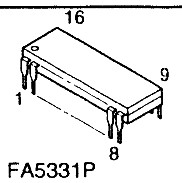
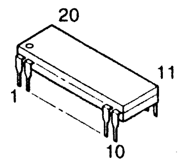
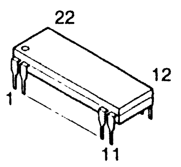
NJM2901N
NJM2902N
TC74HC4066AP
TC74HCT04AP



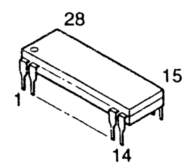
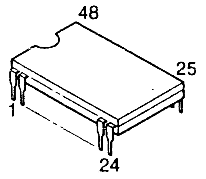
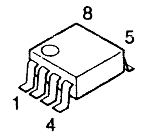
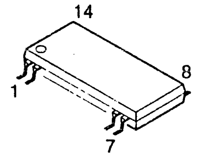
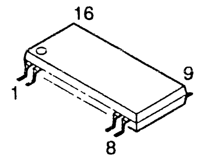
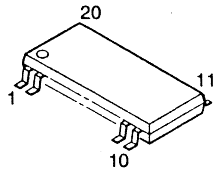
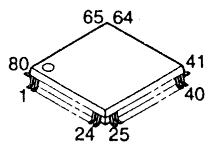
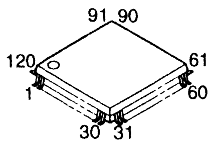
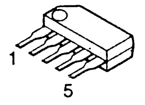
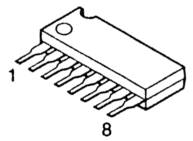
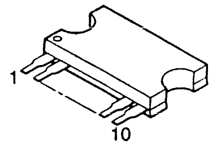
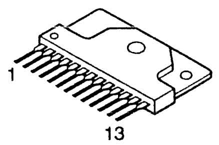
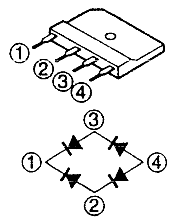
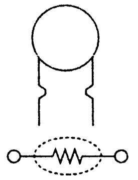
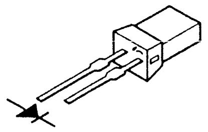
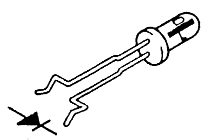
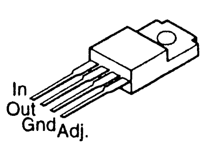
FA5331P
M51995P
TC4053BP
TC4538BP
TC74HC4052AP



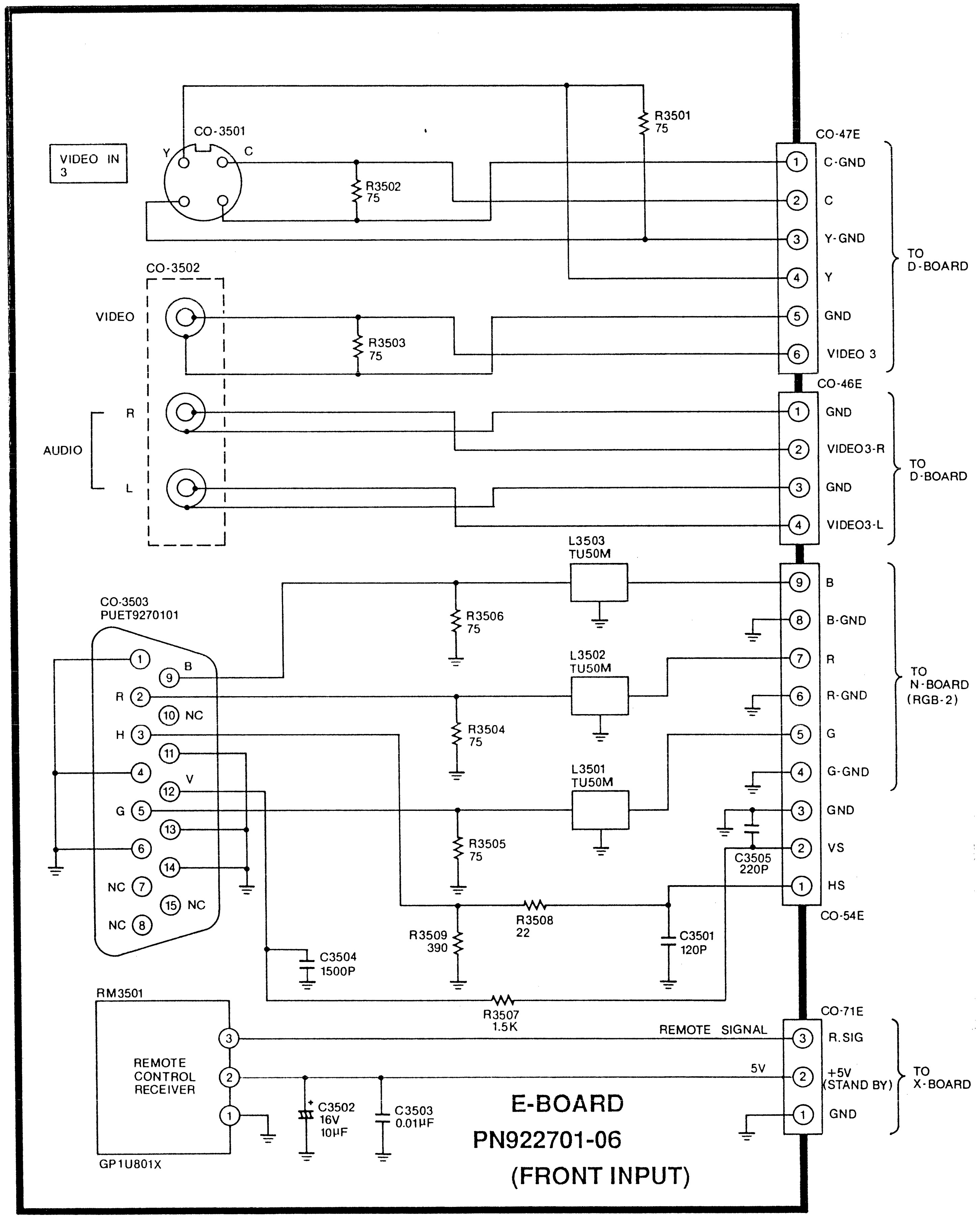
M62352P-650



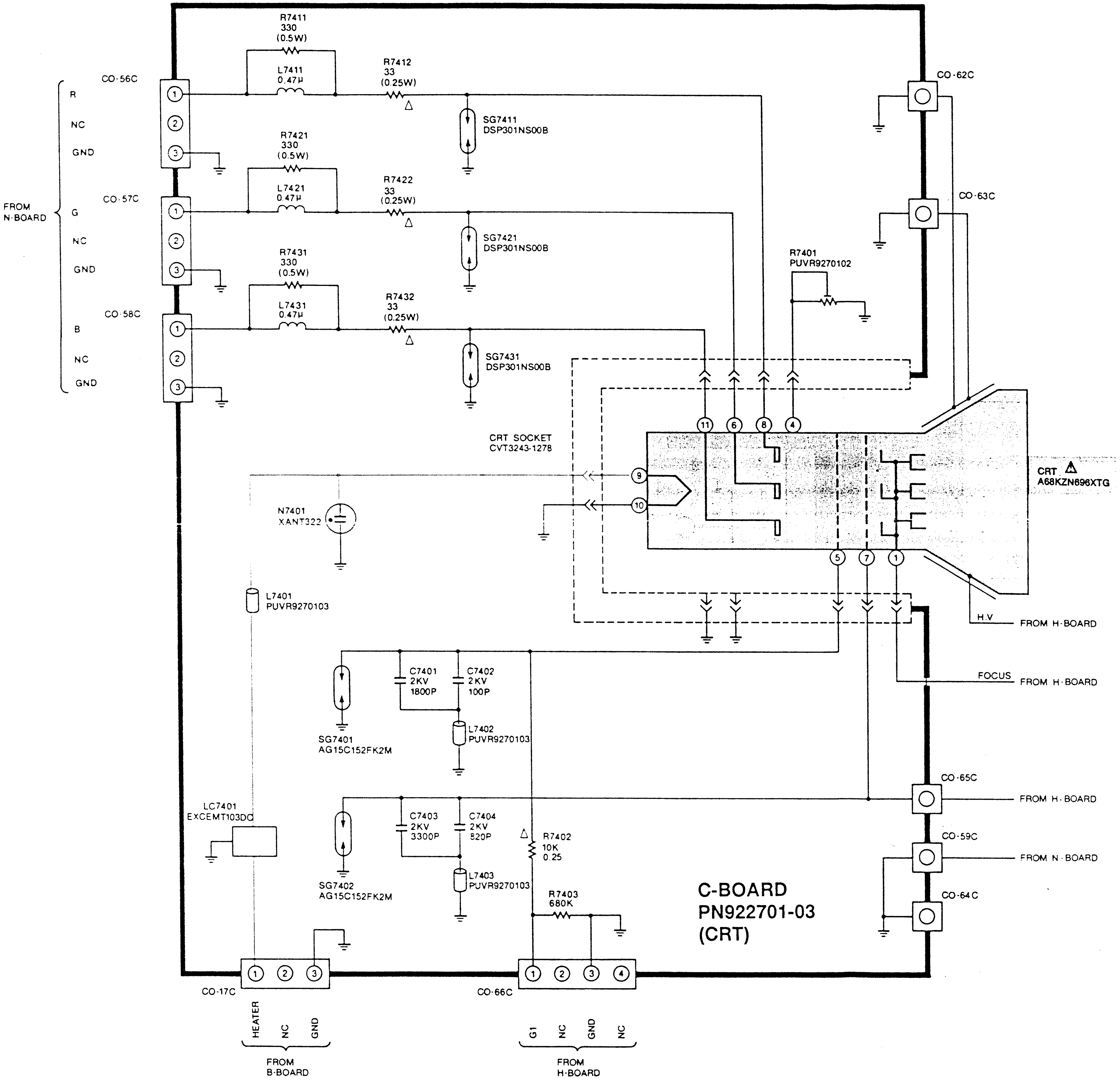
CXA1279AS
LA7852
M62358P-650

 M52327SP	 TA8867AN	 NJM4560M	 NJM3403AM	 NJU6402BM
 M62352FP-75NC	 65 64 80 41 1 40 24 25 M38063M6-397FP	 91 90 120 61 1 60 30 31 μPD65640GD-1705BB	 LA7213 M51953AL-600Y	 MM1111XS MM1112XS
 LA4270 LA7846	 LA7837	 U6SB60	 901P44E180YR16 NTH9D160LA-1	 LN342GPX-(TA3) LN442YPX-(TA3)
 LN11WP23-(TDA)	 In Out Gnd Adj. PQ30RV11			

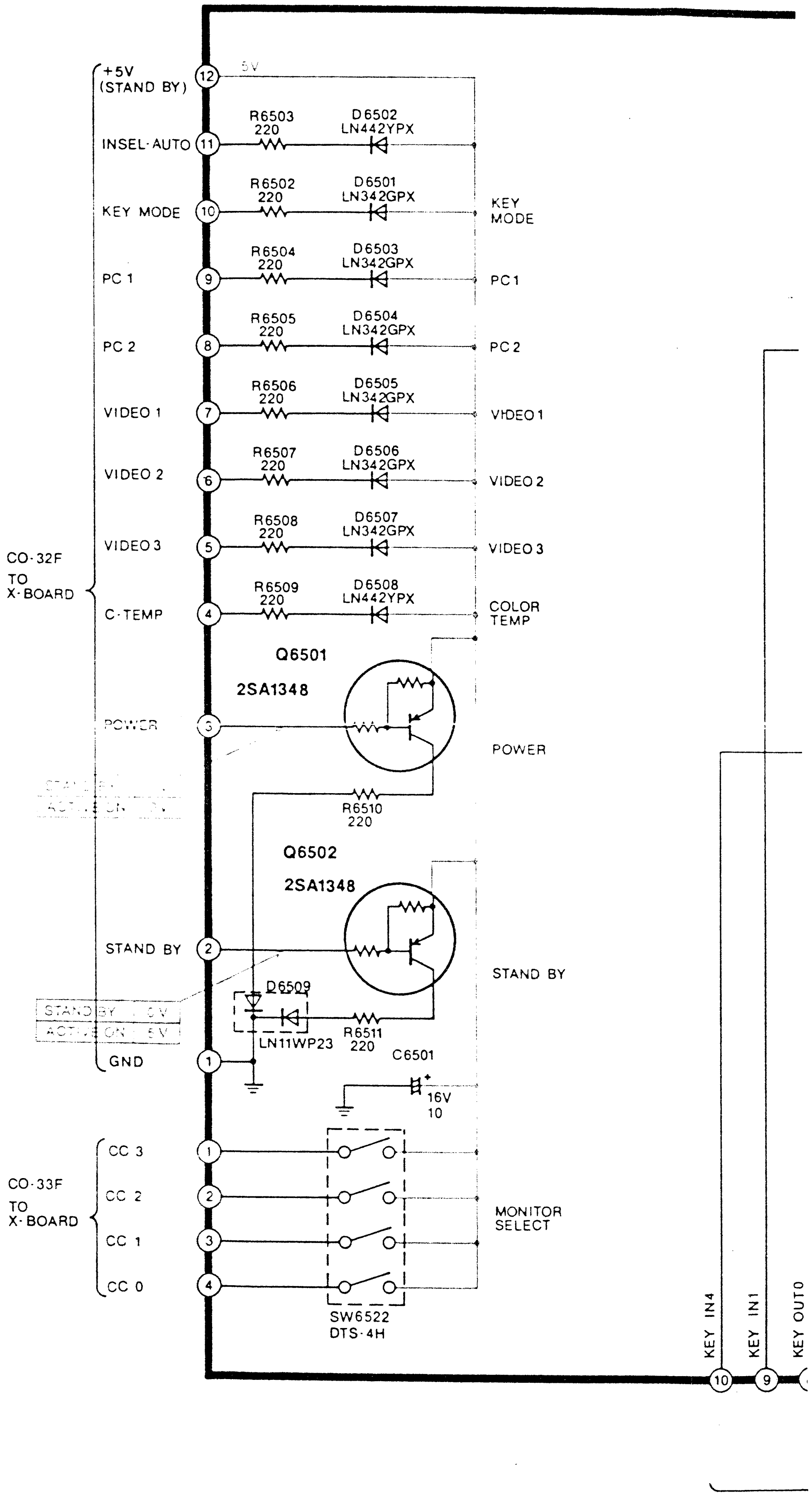
E-Board

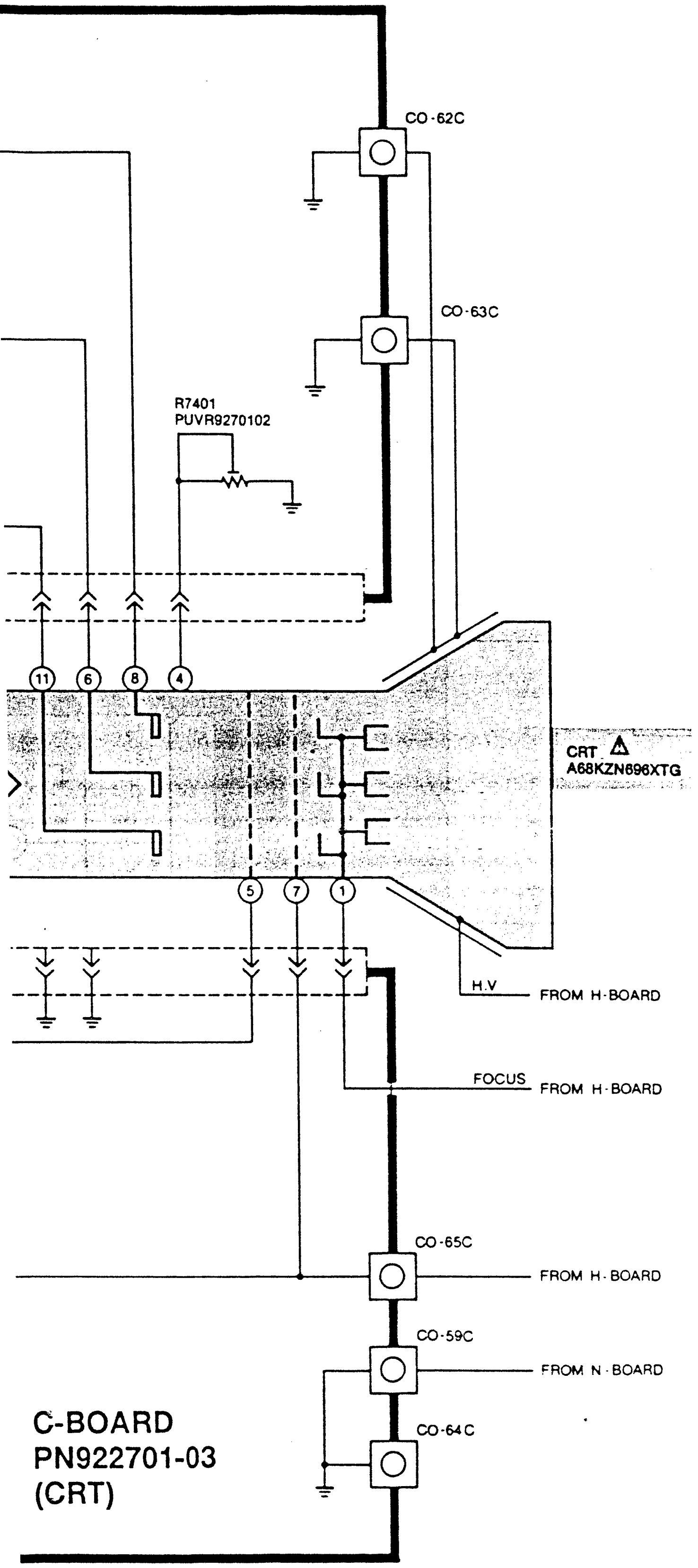

VIDEO IN
3
CO-3501
Y
C
R3502
75
R3501
75
CO-47E
① C-GND
② C
③ Y-GND
④ Y
⑤ GND
⑥ VIDEO 3
TO
D-BOARD
CO-3502
VIDEO
R3503
75
CO-46E
AUDIO
R
L
① GND
② VIDEO3-R
③ GND
④ VIDEO3-L
TO
D-BOARD
L3503
TU50M
CO-3503
PUET9270101
R3506
75
⑨ B
⑧ B-GND
⑦ R
⑥ R-GND
⑤ G
④ G-GND
③ GND
② VS
① HS
TO
N-BOARD
(RGB-2)
L3502
TU50M
R3504
75
L3501
TU50M
R3505
75
C3505
220P
CO-54E
① ⑨ B
R ② ⑩ NC
H ③ ⑪
④ ⑫ V
G ⑤ ⑬
⑥ ⑭
NC ⑦ ⑮ NC
NC ⑧
R3509
390
R3508
22
C3501
120P
C3504
1500P
R3507
1.5K
RM3501
REMOTE
CONTROL
RECEIVER
GP1U801X
③ ② ①
REMOTE SIGNAL
5V
C3502
16V
10μF
C3503
0.01μF
CO-71E
③ R.SIG
② +5V (STAND BY)
① GND
TO
X-BOARD
E-BOARD
PN922701-06
(FRONT INPUT)

C-Board

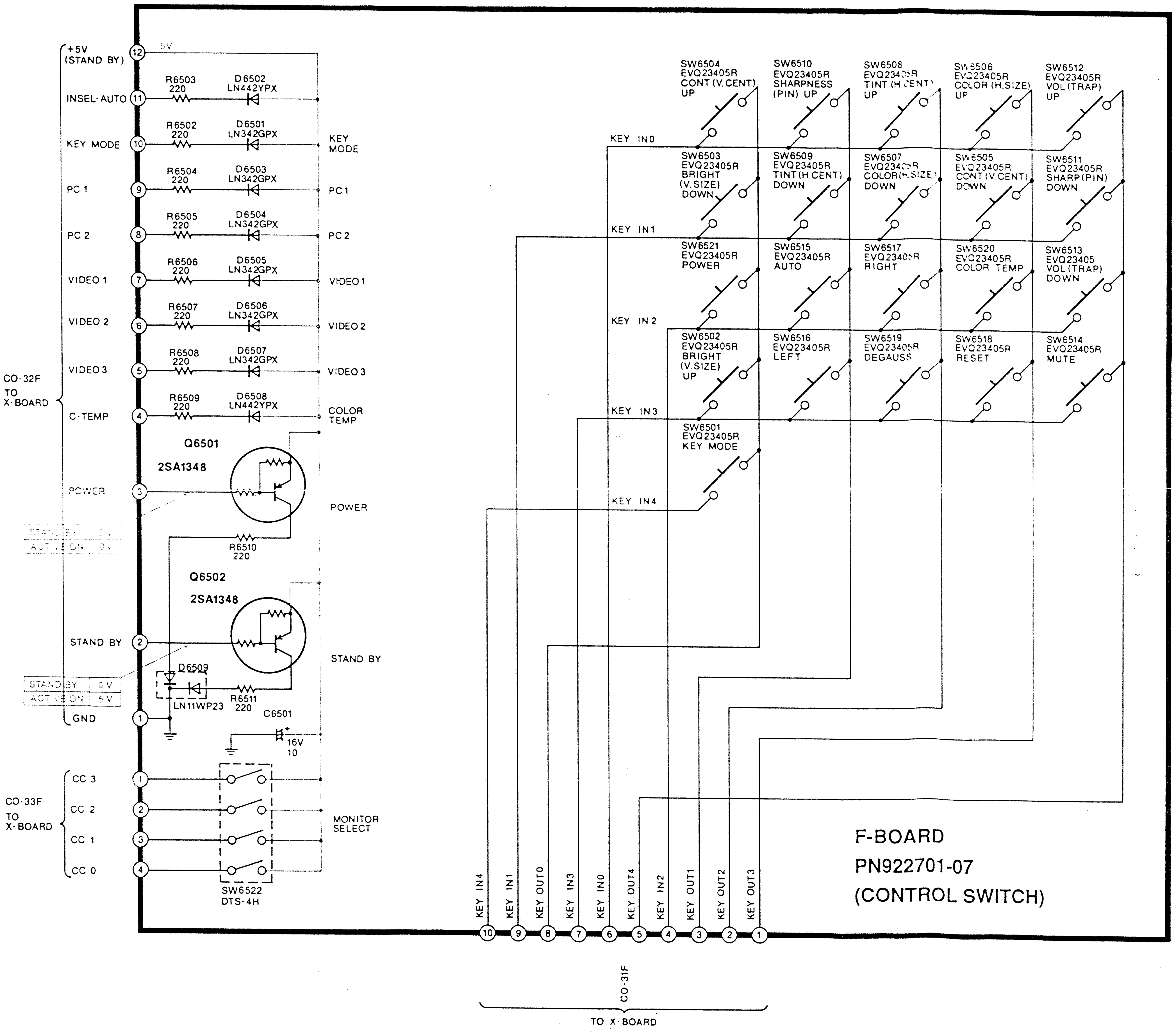

FROM N·BOARD
R
NC
GND
G
NC
GND
B
NC
GND
CO·56C
CO·57C
CO·58C
R7411 330 (0.5W)
L7411 0.47μ
R7412 33 (0.25W)
SG7411 DSP301NS00B
R7421 330 (0.5W)
L7421 0.47μ
R7422 33 (0.25W)
SG7421 DSP301NS00B
R7431 330 (0.5W)
L7431 0.47μ
R7432 33 (0.25W)
SG7431 DSP301NS00B
CO·62C
CO·63C
R7401 PUVR9270102
CRT SOCKET CVT3243-1278
CRT ⚠ A68KZN896XTG
N7401 XANT322
L7401 PUVR9270103
H.V
FROM H·BOARD
FOCUS
FROM H·BOARD
C7401 2KV 1800P
C7402 2KV 100P
SG7401 AG15C152FK2M
L7402 PUVR9270103
CO·65C
FROM H·BOARD
CO·59C
FROM N·BOARD
CO·64C
LC7401 EXCEMT103DC
C7403 2KV 3300P
C7404 2KV 820P
R7402 10K 0.25
SG7402 AG15C152FK2M
L7403 PUVR9270103
R7403 680K
C-BOARD PN922701-03 (CRT)
CO·17C
CO·66C
HEATER
NC
GND
FROM B·BOARD
G1
NC
GND
NC
FROM H·BOARD

F-Board

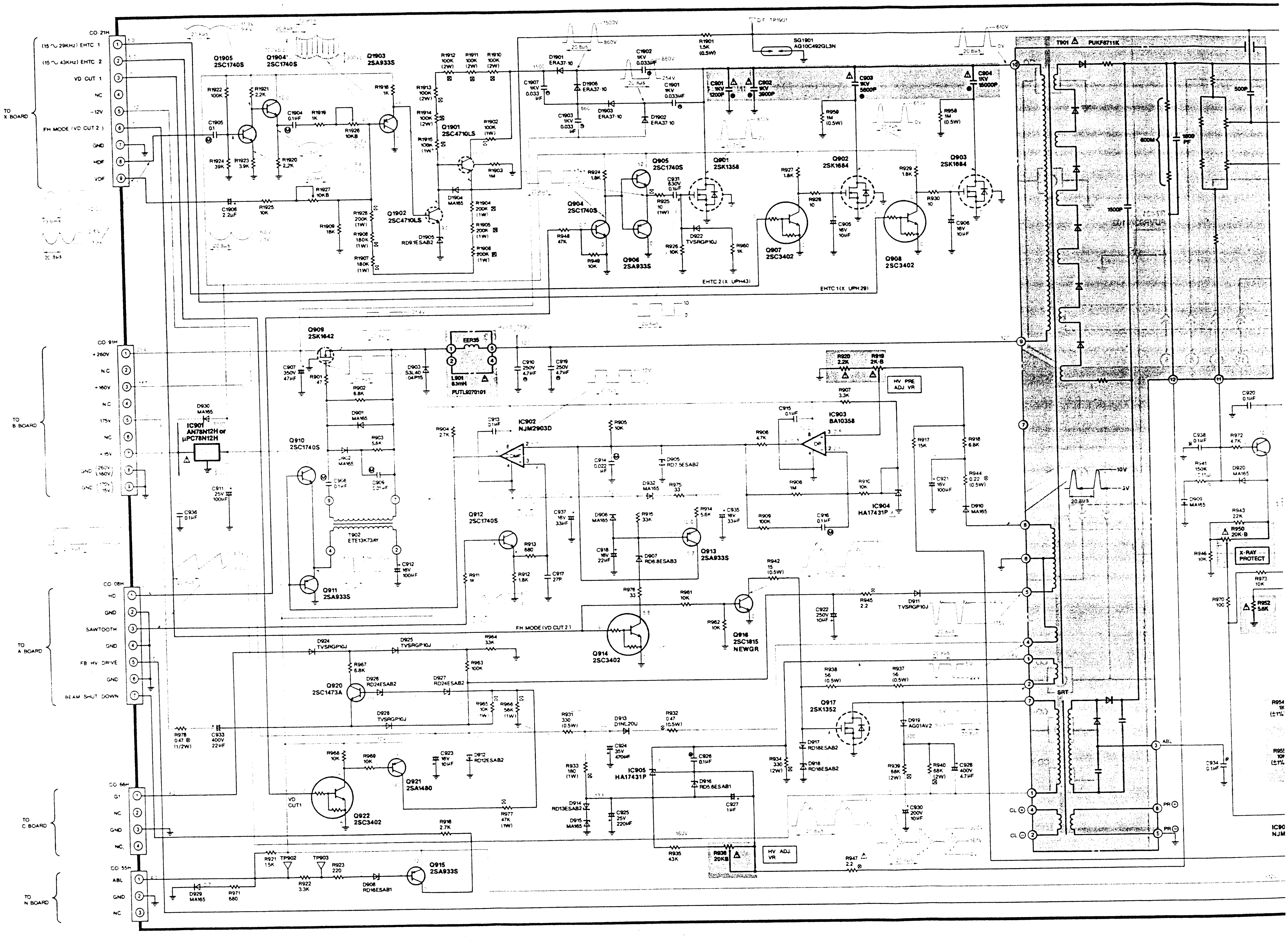

+5V (STAND BY)
5V
INSEL·AUTO
KEY MODE
PC 1
PC 2
VIDEO 1
VIDEO 2
VIDEO 3
C·TEMP
POWER
STAND BY
GND
CO·32F TO X·BOARD
R6503 220
D6502 LN442YPX
R6502 220
D6501 LN342GPX
R6504 220
D6503 LN342GPX
R6505 220
D6504 LN342GPX
R6506 220
D6505 LN342GPX
R6507 220
D6506 LN342GPX
R6508 220
D6507 LN342GPX
R6509 220
D6508 LN442YPX
KEY MODE
PC 1
PC 2
VIDEO 1
VIDEO 2
VIDEO 3
COLOR TEMP
Q6501 2SA1348
POWER
R6510 220
Q6502 2SA1348
STAND BY
STAND BY 5V
ACTIVE ON 5V
D6509 LN11WP23
R6511 220
C6501 16V 10
CO·33F TO X·BOARD
CC 3
CC 2
CC 1
CC 0
MONITOR SELECT
SW6522 DTS·4H
KEY IN4
KEY IN1
KEY OUT0

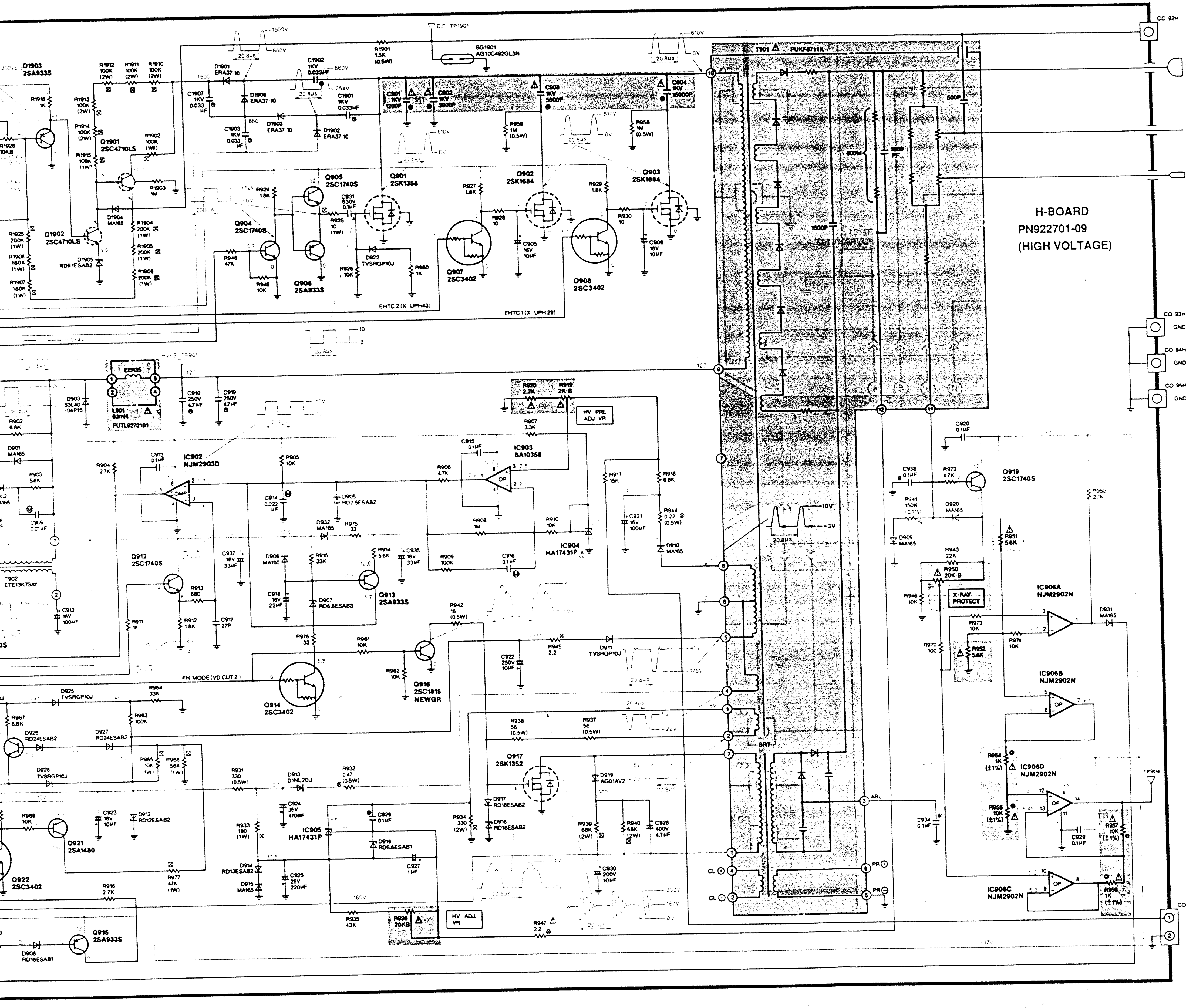

CO-62C
CO-63C
R7401
PUVR9270102
CRT ⚠
A68KZN696XTG
H.V
FROM H-BOARD
FOCUS
FROM H-BOARD
CO-65C
FROM H-BOARD
CO-59C
FROM N-BOARD
CO-64C
C-BOARD
PN922701-03
(CRT)

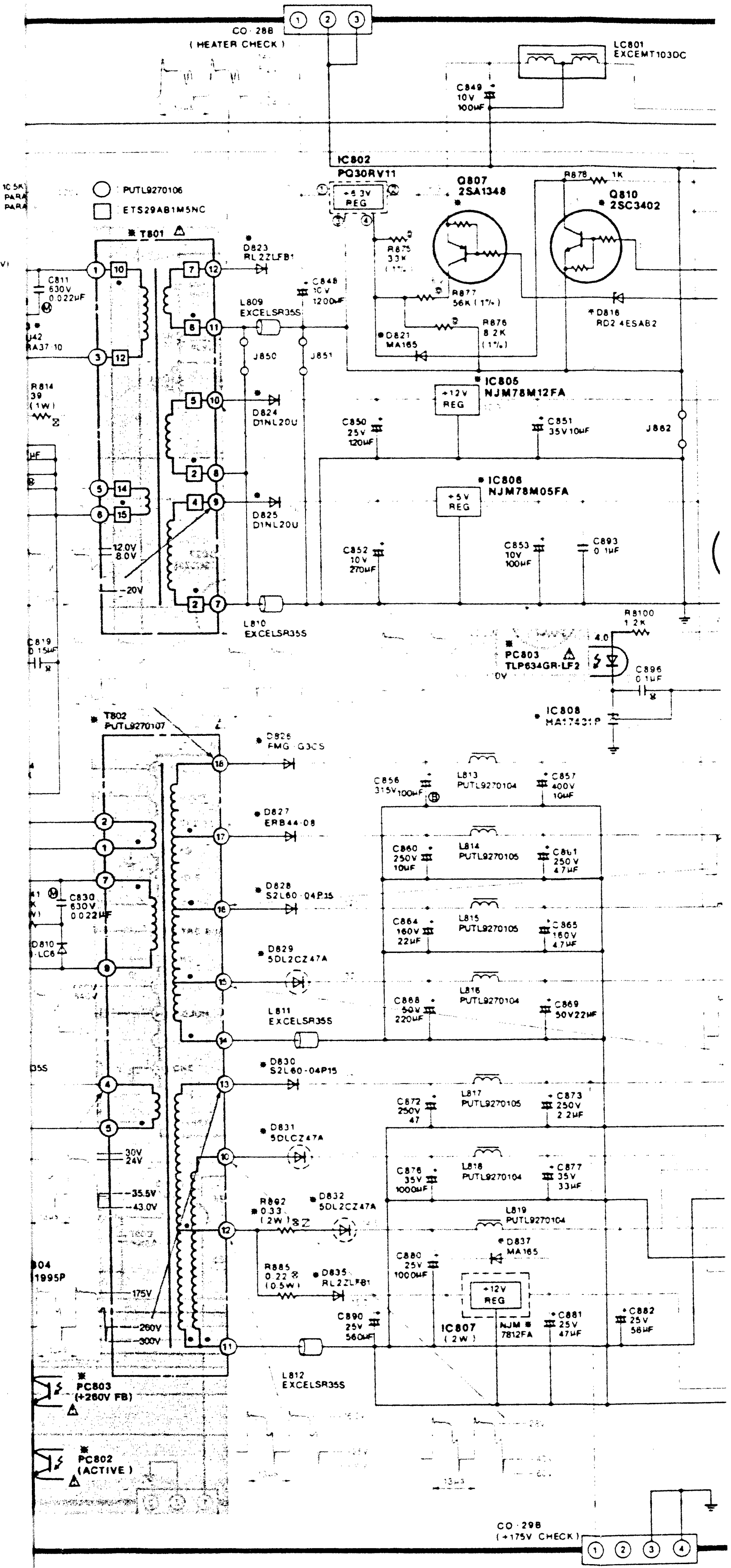
F-Board

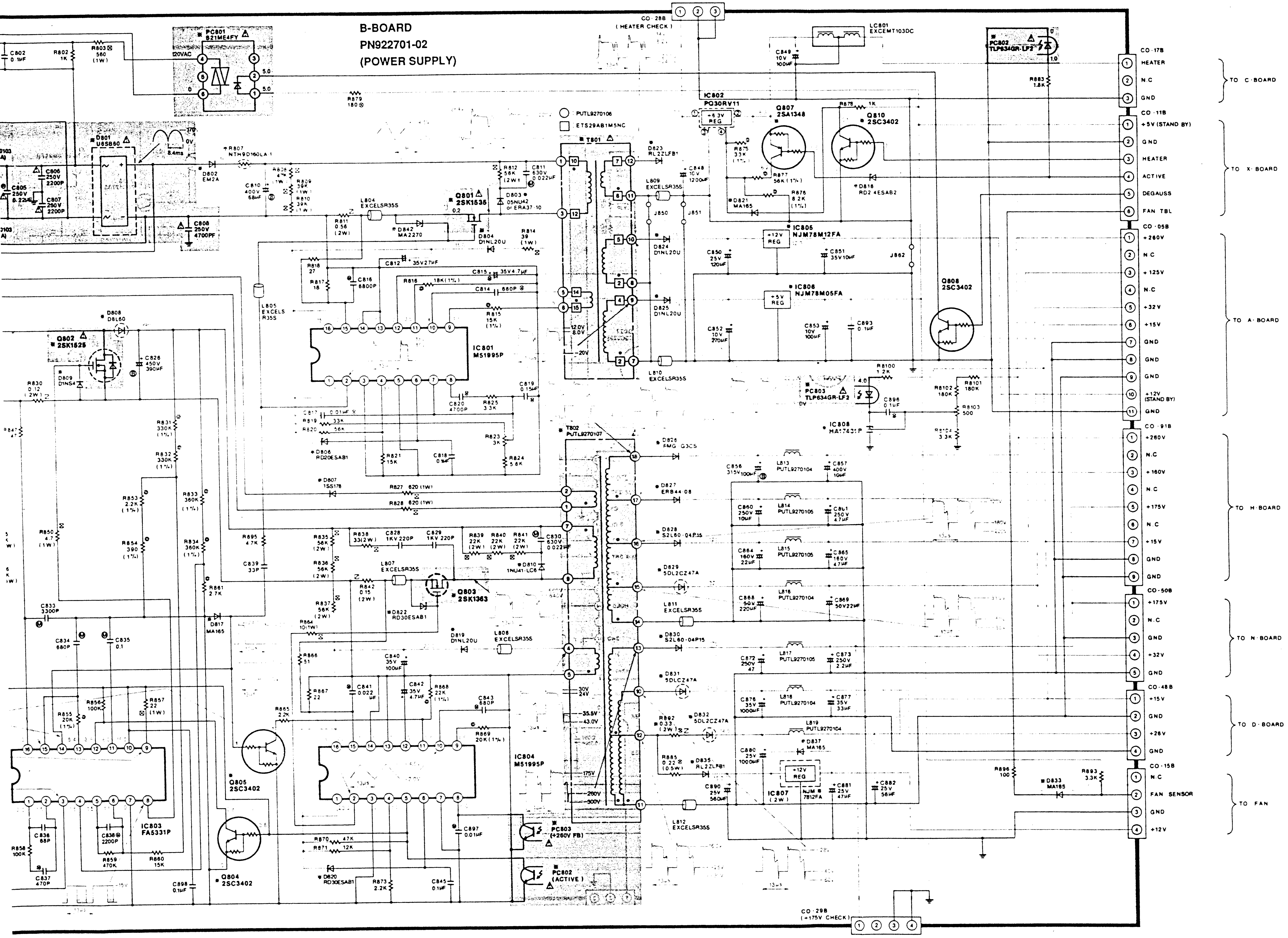

+5V
(STAND BY)
5V
INSEL-AUTO
R6503 220
D6502 LN442YPX
KEY MODE
R6502 220
D6501 LN342GPX
KEY MODE
PC 1
R6504 220
D6503 LN342GPX
PC 1
PC 2
R6505 220
D6504 LN342GPX
PC 2
VIDEO 1
R6506 220
D6505 LN342GPX
VIDEO 1
VIDEO 2
R6507 220
D6506 LN342GPX
VIDEO 2
VIDEO 3
R6508 220
D6507 LN342GPX
VIDEO 3
C-TEMP
R6509 220
D6508 LN442YPX
COLOR TEMP
CO-32F TO X-BOARD
Q6501 2SA1348
POWER
STAND BY 5V
ACTIVE ON 0V
R6510 220
POWER
Q6502 2SA1348
STAND BY
D6509
LN11WP23
STAND BY 0V
ACTIVE ON 5V
R6511 220
STAND BY
GND
C6501
16V 10
CO-33F TO X-BOARD
CC 3
CC 2
CC 1
CC 0
SW6522 DTS-4H
MONITOR SELECT
SW6504 EVQ23405R CONT (V.CENT) UP
SW6510 EVQ23405R SHARPNESS (PIN) UP
SW6508 EVQ23405R TINT (H.CENT) UP
SW6506 EVQ23405R COLOR (H.SIZE) UP
SW6512 EVQ23405R VOL (TRAP) UP
KEY IN0
SW6503 EVQ23405R BRIGHT (V.SIZE) DOWN
SW6509 EVQ23405R TINT (H.CENT) DOWN
SW6507 EVQ23405R COLOR (H.SIZE) DOWN
SW6505 EVQ23405R CONT (V.CENT) DOWN
SW6511 EVQ23405R SHARP (PIN) DOWN
KEY IN1
SW6521 EVQ23405R POWER
SW6515 EVQ23405R AUTO
SW6517 EVQ23405R RIGHT
SW6520 EVQ23405R COLOR TEMP
SW6513 EVQ23405 VOL (TRAP) DOWN
KEY IN2
SW6502 EVQ23405R BRIGHT (V.SIZE) UP
SW6516 EVQ23405R LEFT
SW6519 EVQ23405R DEGAUSS
SW6518 EVQ23405R RESET
SW6514 EVQ23405R MUTE
KEY IN3
SW6501 EVQ23405R KEY MODE
KEY IN4
KEY IN4
KEY IN1
KEY OUT0
KEY IN3
KEY IN0
KEY OUT4
KEY IN2
KEY OUT1
KEY OUT2
KEY OUT3
F-BOARD
PN922701-07
(CONTROL SWITCH)
CO-31F
TO X-BOARD

H-Board

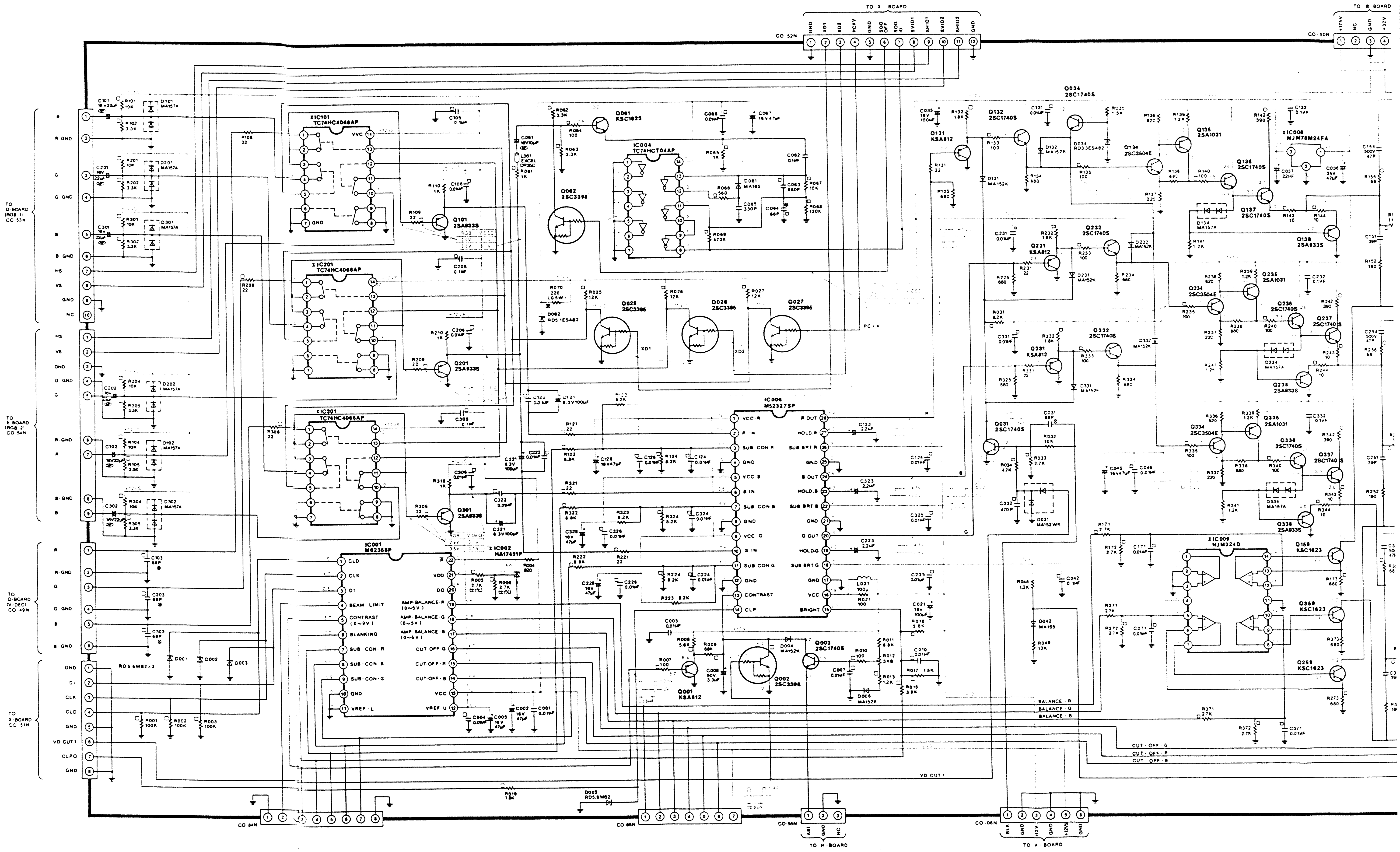

CO 21H
(15 ∿ 29KHz) EHTC 1
(15 ∿ 43KHz) EHTC 2
VD CUT 1
NC
-12V
FH MODE (VD CUT 2)
GND
HDF
VDF
TO X BOARD
CO 91H
+260V
N.C
+160V
N.C
175V
NC
+15V
GND (260V) (160V)
GND (15V)
TO B BOARD
CO 08H
HD
GND
SAWTOOTH
GND
FB HV DRIVE
GND
BEAM SHUT DOWN
TO A BOARD
CO 56H
G1
NC
GND
NC
TO C BOARD
CO 55H
ABL
GND
NC
TO N BOARD
Q1905 2SC1740S
Q1904 2SC1740S
Q1903 2SA933S
Q1901 2SC4710LS
Q1902 2SC4710LS
Q905 2SC1740S
Q901 2SK1358
Q902 2SK1684
Q903 2SK1684
Q904 2SC1740S
Q906 2SA933S
Q907 2SC3402
Q908 2SC3402
Q909 2SK1642
Q910 2SC1740S
Q911 2SA933S
Q912 2SC1740S
Q913 2SA933S
Q914 2SC3402
Q916 2SC1815 NEWGR
Q917 2SK1352
Q920 2SC1473A
Q921 2SA1480
Q922 2SC3402
Q915 2SA933S
IC901 AN78N12H or μPC78N12H
IC902 NJM2903D
IC903 BA10358
IC904 HA17431P
IC905 HA17431P
T901 PUKF6711K
T902 ETE13K73AY
L901 63mH PUTL9270101
EER35
SG1901 AQ10C492GL3N
TP1901
D1901 ERA37-10
D1902 ERA37-10
D1903 ERA37-10
D1906 ERA37-10
D1904 MA165
D1905 RD91ESAB2
C1902 1KV 0.033μF
C1901 1KV 0.033μF
C1903 1KV 0.033μF
C1907 1KV 0.033μF
C801 1KV 1200P
C802 1KV 3900P
C903 1KV 5600P
C904 1KV 15000P
R1901 1.5K (0.5W)
R1912 100K (2W)
R1911 100K (2W)
R1910 100K (2W)
R1913 100K (2W)
R1914 100K (2W)
R1915 100K (1W)
R1902 100K (1W)
R1903 1M
R1904 200K (1W)
R1905 200K (1W)
R1906 200K (1W)
R1907 180K (1W)
R1908 180K (1W)
R1909 18K
R1928 200K (1W)
R1927 10KB
R1926 10KB
R1922 100K
R1921 2.2K
R1923 3.9K
R1924 39K
R1920 2.2K
R1925 10K
R1918 1K
R1919 1K
C1905 0.1
C1904 0.1μF
C1906 2.2μF
R958 1M (0.5W)
R959 1M (0.5W)
D922 TVSRGP10J
C931 630V 0.1μF
C905 16V 10μF
C906 16V 10μF
EHTC 2 (X UPH43)
EHTC 1 (X UPH 29)
HV PRE ADJ VR
R920 2.2K
R919 2K-B
R907 3.3K
C910 250V 4.7μF
C919 250V 4.7μF
D903 S3L40 (04P15)
C907 350V 47μF
R901 47
D930 MA165
D901 MA165
D902 MA165
R902 6.8K
R903 5.6K
C908 0.1μF
C909 0.1μF
C911 25V 100μF
C912 16V 100μF
C936 0.1μF
D905 RD7.5ESAB2
D906 MA165
D907 RD6.8ESAB3
D932 MA165
C914 0.022μF
C918 16V 22μF
C937 16V 33μF
C935 16V 33μF
C917 27P
R904 2.7K
R905 10K
R906 4.7K
R908 1M
R909 100K
R910 10K
C915 0.1μF
C916 0.1μF
R913 680
R912 1.8K
R914 5.6K
R915 33K
R975 33
R917 15K
R918 6.8K
R944 0.22 (0.5W)
C921 16V 100μF
D910 MA165
D920 MA165
D909 MA165
R942 15 (0.5W)
R961 10K
R962 10K
R976 33
R945 2.2
D911 TVSRGP10J
C922 250V 10μF
FH MODE (VD CUT 2)
D924 TVSRGP10J
D925 TVSRGP10J
D926 RD24ESAB2
D927 RD24ESAB2
D928 TVSRGP10J
R964 33K
R963 100K
R967 6.8K
R965 10K
R966 56K (1W)
R978 0.47 (1/2W)
C933 400V 22μF
R931 330 (0.5W)
D913 D1NL20U
R932 0.47 (0.5W)
R938 56 (0.5W)
R937 56 (0.5W)
D919 AG01AV2
D917 RD18ESAB2
D918 RD18ESAB2
R934 330 (2W)
R939 68K (2W)
R940 68K (2W)
C928 400V 4.7μF
C930 200V 10μF
C924 35V 470μF
C926 0.1μF
D916 RD5.6ESAB1
C927 1μF
R933 180 (1W)
D914 RD13ESAB2
D915 MA165
C925 25V 220μF
R935 43K
R936 20KB
HV ADJ VR
R947 2.2
R968 10K
R969 10K
C923 16V 10μF
D912 RD12ESAB2
R977 47K (1W)
R916 2.7K
VD CUT1
R921 1.5K
TP902
TP903
R923 220
R922 3.3K
D908 RD16ESAB1
D929 MA165
R971 680
C938 0.1μF
R972 4.7K
R941 150K
C920 0.1μF
R943 22K
R950 20K-B
X-RAY PROTECT
R946 10K
R973 10K
R970 100
R952 5.6K
C934 0.1μF
500P
600M
1800 PF
1500P
SRT
ABL
CL⊕
CL⊖
PR⊕
PR⊖
20.8μS
10V
-3V
1600V
860V
610V
0V
12V
R954 1K (±1%)
R955
IC90 NJM

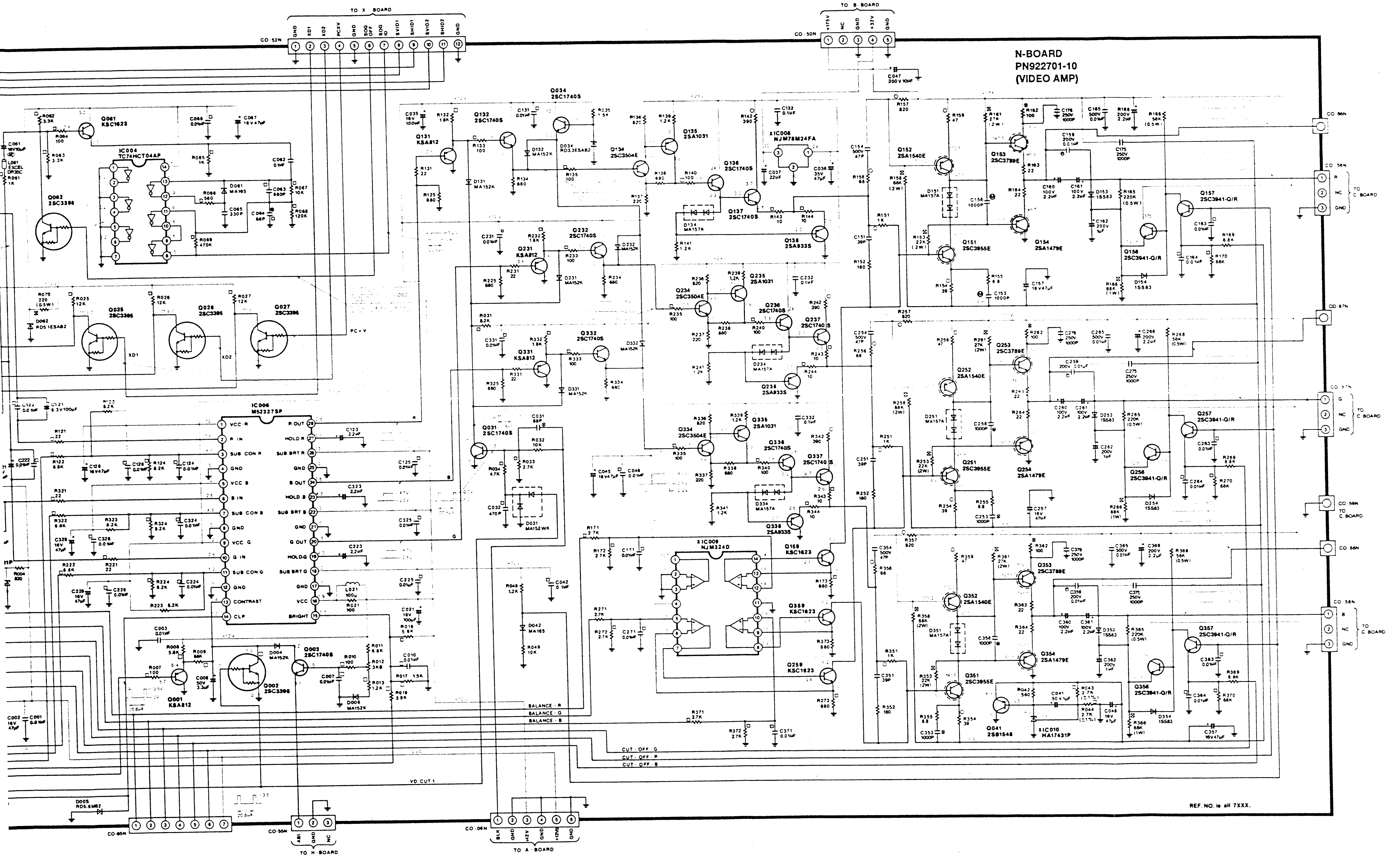

H-BOARD
PN922701-09
(HIGH VOLTAGE)
T901 PUKF6711K
ANODE 29KV 1.6mA MAX
FOCUS
SCREEN (400～1200V)
CO 92H
CO 93H GND
CO 94H GND
CO 95H GND
CO 96H
D.F. TP1901
SG1901 AG10C492GL3N
Q1903 2SA933S
Q1901 2SC4710LS
Q1902 2SC4710LS
Q904 2SC1740S
Q905 2SC1740S
Q906 2SA933S
Q901 2SK1358
Q902 2SK1684
Q903 2SK1684
Q907 2SC3402
Q908 2SC3402
EHTC 2 (X UPH43)
EHTC 1 (X UPH 29)
L901 8.3mH PUTL9270101
IC902 NJM2903D
IC903 BA10358
IC904 HA17431P
HV PRE ADJ. VR
Q912 2SC1740S
T902 ETE13K73AY
Q913 2SA933S
Q914 2SC3402
Q916 2SC1815 NEWGR
FH MODE (VD CUT 2)
Q919 2SC1740S
X-RAY PROTECT
IC906A NJM2902N
IC906B NJM2902N
IC906C NJM2902N
IC906D NJM2902N
Q917 2SK1352
IC905 HA17431P
HV ADJ. VR
Q921 2SA1480
Q922 2SC3402
Q915 2SA933S
SRT
ABL
TP904
PR⊕
PR⊖
CL⊕
CL⊖
20.8μs


CO 28B (HEATER CHECK)
LC801 EXCEMT103DC
IC802 PQ30RV11
+3.3V REG
Q807 2SA1348
Q810 2SC3402
PUTL9270106
ETS29AB1M5NC
T801
IC805 NJM78M12FA
+12V REG
IC806 NJM78M05FA
+5V REG
PC803 TLP634GR-LF2
IC808 HA17431P
T802 PUTL9270107
IC807 NJM 7812FA
+12V REG
PC803 (+260V FB)
PC802 (ACTIVE)
CO 29B (+175V CHECK)
L809 EXCELSR35S
L810 EXCELSR35S
L811 EXCELSR35S
L812 EXCELSR35S

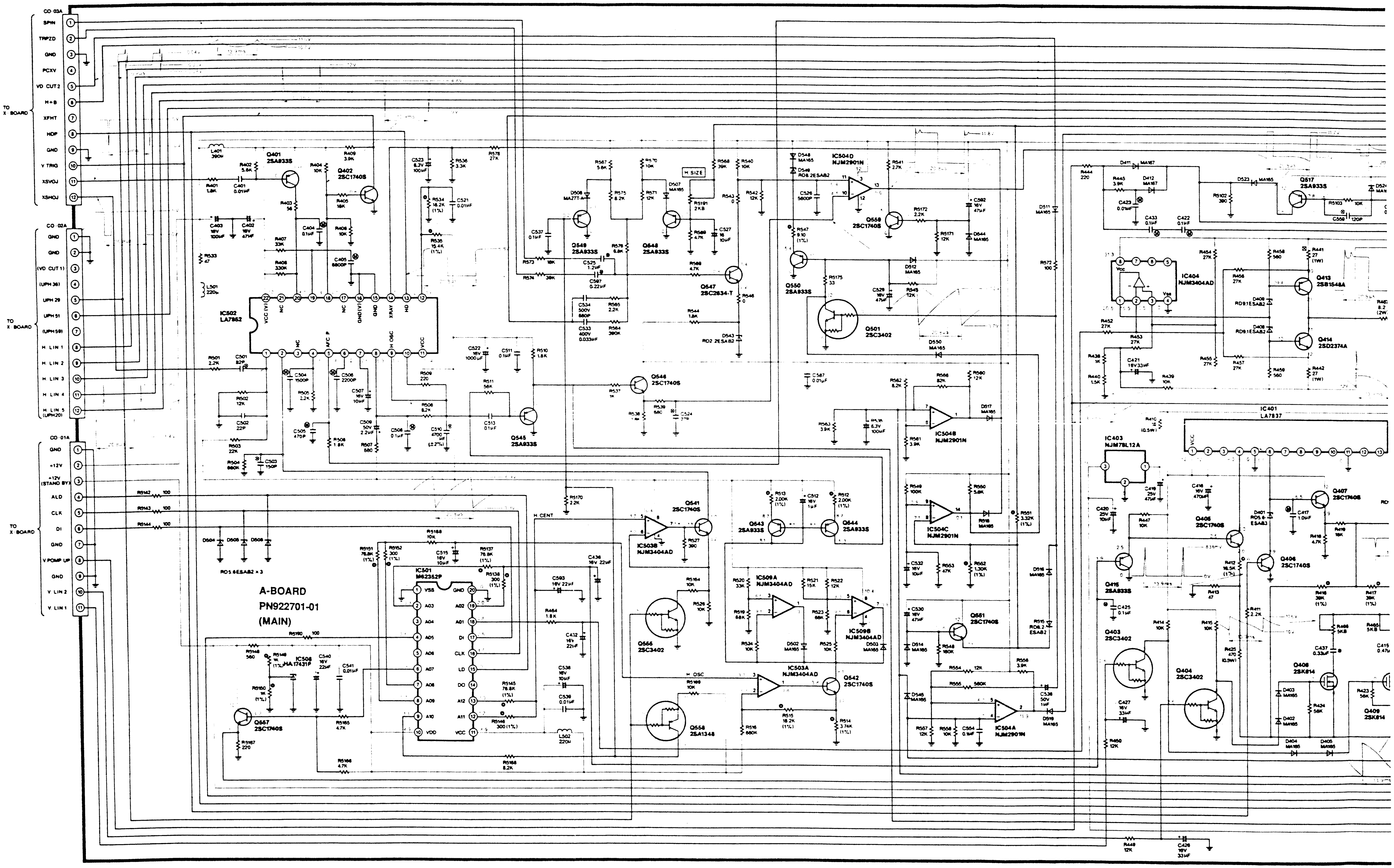

B-BOARD
PN922701-02
(POWER SUPPLY)
CO-28B (HEATER CHECK)
LC801 EXCEMT103DC
PC801 S21ME4FY
120VAC
PC802 TLP634GR-LF2
D801 U6SB60
R807 NTH9D160LA
D802 EM2A
C806 250V 2200P
C805 250V
C807 250V 2200P
C808 250V 4700PF
C810 400V 68μF
R812 56K (2W)
C811 630V 0.022μF
Q801 2SK1535
D803 05NU42 or ERA37-10
D842 MA2270
D804 D1NL20U
R811 0.56 (2W)
L804 EXCELSR35S
R814 39 (1W)
PUTL9270106
ETS29AB1M5NC
T801
D823 RL2ZLFB1
C848 10V 1200μF
L809 EXCELSR35S
J850
J851
D824 D1NL20U
D825 D1NL20U
L810 EXCELSR35S
IC802 PQ30RV11
+6.3V REG
Q807 2SA1348
Q810 2SC3402
R875 33K (1%)
R877 56K (1%)
R876 8.2K (1%)
D821 MA165
D818 RD2.4ESAB2
IC805 NJM78M12FA
+12V REG
C850 25V 120μF
C851 35V10μF
J862
IC806 NJM78M05FA
+5V REG
C852 10V 270μF
C853 10V 100μF
C893 0.1μF
Q808 2SC3402
IC801 M51995P
C812 35V27μF
C815 35V4.7μF
C814 680P
C816 6800P
R816 18K (1%)
R815 15K (1%)
L805 EXCELSR35S
D808 D8L60
Q802 2SK1525
C826 450V 390μF
D809 D1NS4
R830 0.12 (2W)
C819 0.15μF
C820 4700P
R825 3.3K
R823 3K
R824 5.6K
C818 0.1μF
R821 15K
D806 RD20ESAB1
R831 330K (1%)
R832 330K (1%)
D807 1SS178
R827 620 (1W)
R828 620 (1W)
R833 360K (1%)
R834 360K (1%)
R853 2.2K (1%)
R854 390 (1%)
R850 4.7 (1W)
R895 4.7K
C839 33P
R861 2.7K
D817 MA165
C833 3300P
C834 680P
C835 0.1
R835 56K (2W)
R836 56K (2W)
R837 56K (2W)
R838 33(2W)
C828 1KV 220P
C829 1KV 220P
R839 22K (2W)
R840 22K (2W)
R841 22K (2W)
C830 630V 0.022μF
D810 1NU41-LC6
L807 EXCELSR35S
Q803 2SK1363
R842 0.15 (2W)
D822 RD30ESAB1
R864 10(1W)
D819 D1NL20U
L808 EXCELSR35S
R866 51
R867 22
C840 35V 100μF
C841 0.022μF
C842 35V 4.7μF
R868 22K (1%)
C843 680P
R869 20K (1%)
IC804 M51995P
R865 2.2K
R855 20K (1%)
R856 100K
R857 22 (1W)
IC803 FA5331P
Q805 2SC3402
Q804 2SC3402
C836 68P
R858 100K
C837 470P
C838 2200P
R859 470K
R860 15K
C898 0.1μF
R870 47K
R871 12K
D820 RD30ESAB1
R873 2.2K
C845 0.1μF
C897 0.01μF
PC803 (+260V FB)
PC802 (ACTIVE)
T802 PUTL9270107
D826 FMG-G3CS
C856 315V 100μF
L813 PUTL9270104
C857 400V 10μF
D827 ERB44-08
C860 250V 10μF
L814 PUTL9270105
C861 250V 4.7μF
D828 S2L60-04P15
C864 160V 22μF
L815 PUTL9270105
C865 160V 4.7μF
D829 5DL2CZ47A
C868 50V 220μF
L816 PUTL9270104
C869 50V22μF
L811 EXCELSR35S
D830 S2L60-04P15
C872 250V 47
L817 PUTL9270105
C873 250V 2.2μF
D831 5DL2CZ47A
C876 35V 1000μF
L818 PUTL9270104
C877 35V 33μF
R892 0.33 (2W)
D832 5DL2CZ47A
L819 PUTL9270104
D837 MA165
C880 25V 1000μF
R885 0.22 (0.5W)
D835 RL2ZLFB1
C890 25V 560μF
+12V REG
IC807 (2W) NJM 7812FA
C881 25V 47μF
C882 25V 56μF
L812 EXCELSR35S
R8100 1.2K
PC803 TLP634GR-LF2
C896 0.1μF
IC808 HA17431P
R8102 180K
R8101 180K
R8103 500
R8104 3.3K
R883 1.8K
R878 1K
R879 180
R802 1K
R803 560 (1W)
C802 0.1μF
R896 100
D833 MA165
R893 3.3K
CO-29B (+175V CHECK)
CO-17B
HEATER
N.C
GND
TO C-BOARD
CO-11B
+5V (STAND BY)
GND
HEATER
ACTIVE
DEGAUSS
FAN TBL
TO X-BOARD
CO-05B
+260V
N.C
+125V
N.C
+32V
+15V
GND
GND
GND
+12V (STAND BY)
GND
TO A-BOARD
CO-91B
+260V
N.C
+160V
N.C
+175V
N.C
+15V
GND
GND
TO H-BOARD
CO-50B
+175V
N.C
GND
+32V
GND
TO N-BOARD
CO-48B
+15V
GND
+28V
GND
TO D-BOARD
CO-15B
N.C
FAN SENSOR
GND
+12V
TO FAN
120V
8.0V
-20V
30V
24V
35.5V
43.0V
175V
260V
300V
8.4ms
170
0V
5.0
4.0
1.0
13μs

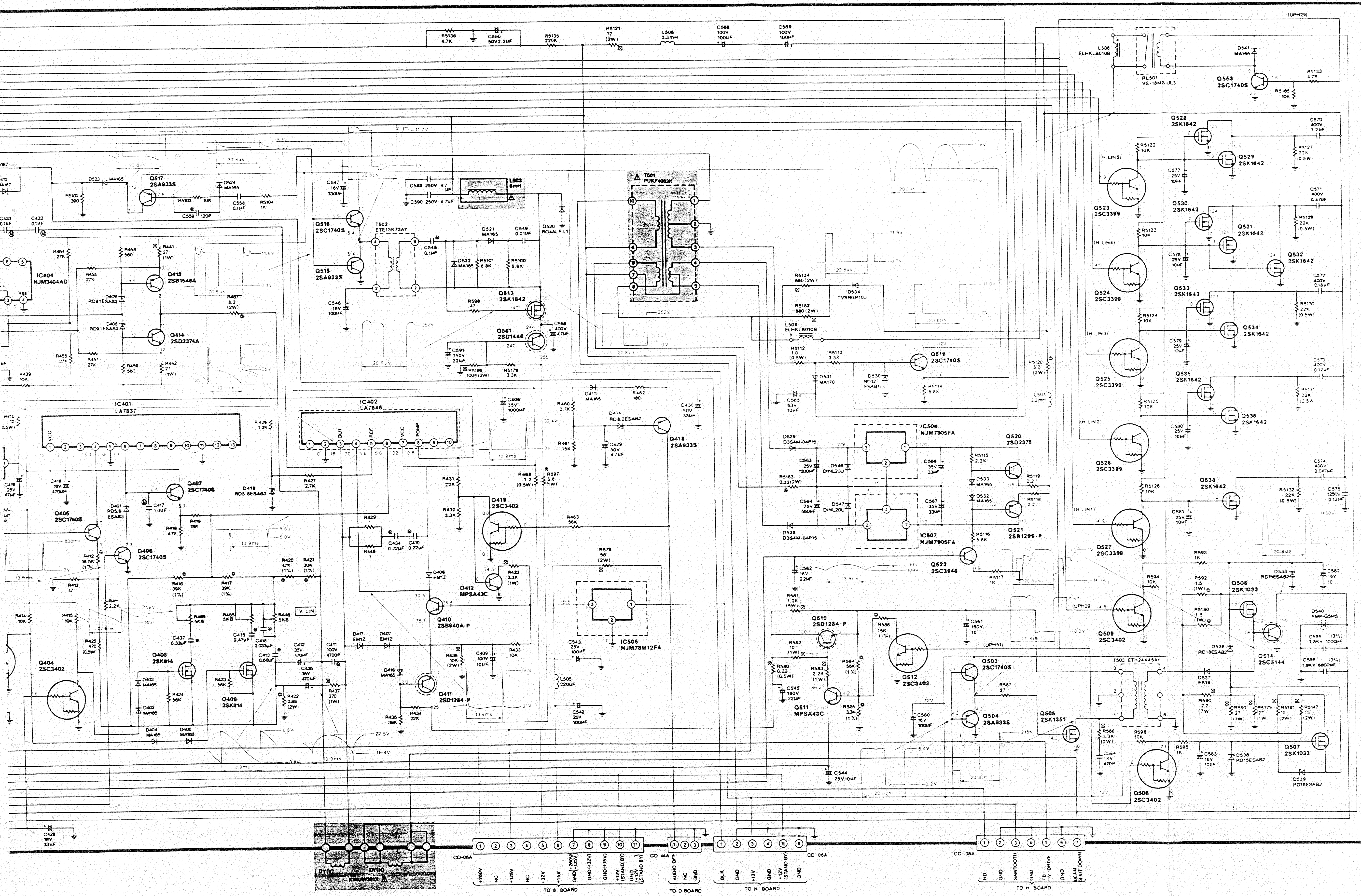
N-Board


TO X BOARD
CO-52N
GND
XD1
XD2
PC±V
GND
SOG OFF
SOG IO
SVID1
SHID1
SVID2
SHID2
GND
TO B BOARD
CO-50N
+175V
NC
GND
+32V
TO D BOARD (RGB 1) CO-53N
R
R GND
G
G GND
B
B GND
HS
VS
GND
NC
TO E BOARD (RGB 2) CO-54N
TO D BOARD (VIDEO) CO-49N
TO X BOARD CO-51N
GND
DI
CLK
CLD
VD CUT1
CLPO
IC101 TC74HC4066AP
IC201 TC74HC4066AP
IC301 TC74HC4066AP
IC004 TC74HCT04AP
IC001 M62358P
IC002 HA17431P
IC006 M52327SP
IC008 NJM78M24FA
IC009 NJM324D
Q061 KSC1623
Q062 2SC3398
Q025 2SC3395
Q026 2SC3395
Q027 2SC3395
Q101 2SA933S
Q201 2SA933S
Q301 2SA933S
Q001 KSA812
Q002 2SC3398
Q003 2SC1740S
Q031 2SC1740S
Q034 2SC1740S
Q131 KSA812
Q132 2SC1740S
Q134 2SC3504E
Q135 2SA1031
Q136 2SC1740S
Q137 2SC1740S
Q138 2SA933S
Q231 KSA812
Q232 2SC1740S
Q234 2SC3504E
Q235 2SA1031
Q236 2SC1740S
Q237 2SC1740S
Q238 2SA933S
Q331 KSA812
Q332 2SC1740S
Q334 2SC3504E
Q335 2SA1031
Q336 2SC1740S
Q337 2SC1740S
Q338 2SA933S
Q159 KSC1623
Q359 KSC1623
Q259 KSC1623
CLD
CLK
DI
BEAM LIMIT
CONTRAST (0~9V)
BLANKING
SUB·CON·R
SUB·CON·B
SUB·CON·G
GND
VREF·L
AMP·BALANCE·R (0~5V)
AMP·BALANCE·G (0~5V)
AMP·BALANCE·B (0~5V)
CUT·OFF·G
CUT·OFF·R
CUT·OFF·B
VCC
VREF·U
VDD
DO
VCC R
R IN
SUB CON R
GND
VCC B
B IN
SUB CON B
VCC G
G IN
SUB CON G
CONTRAST
CLP
R OUT
HOLD R
SUB BRT R
B OUT
HOLD B
SUB BRT B
G OUT
HOLD G
SUB BRT G
VCC
BRIGHT
BALANCE·R
BALANCE·G
BALANCE·B
CUT·OFF·G
CUT·OFF·R
CUT·OFF·B
VD CUT 1
PC±V
XD1
XD2
RD5.6MB2×3
D005 RD5.6MB2
CO-84N
CO-85N
CO-55N
ABL
GND
NC
TO H·BOARD
CO-06N
BLK
GND
+12V
GND
+12V
GND
TO A·BOARD


N-BOARD
PN922701-10
(VIDEO AMP)
TO X BOARD
CO-52N
GND
XD1
XD2
PCXV
GND
SOG OFF
SOG ON
SVID1
SHID1
SVID2
SHID2
GND
TO B BOARD
CO-50N
+175V
NC
GND
+32V
GND
C047 200V 10μF
Q061 KSC1623
Q062 2SC3398
IC004 TC74HCT04AP
Q025 2SC3395
Q026 2SC3395
Q027 2SC3396
PC+V
XD1
XD2
IC006 M52327SP
VCC R
R IN
SUB CON R
GND
VCC B
B IN
SUB CON B
GND
VCC G
G IN
SUB CON G
GND
CONTRAST
CLP
R OUT
HOLD R
SUB BRT R
GND
B OUT
HOLD B
SUB BRT B
GND
G OUT
HOLD G
SUB BRT G
GND
VCC
BRIGHT
Q001 KSA812
Q002 2SC3398
Q003 2SC1740S
Q031 2SC1740S
Q034 2SC1740S
Q131 KSA812
Q132 2SC1740S
Q134 2SC3504E
Q135 2SA1031
Q136 2SC1740S
Q137 2SC1740S
Q138 2SA933S
XIC008 NJM78M24FA
Q231 KSA812
Q232 2SC1740S
Q234 2SC3504E
Q235 2SA1031
Q236 2SC1740S
Q237 2SC1740S
Q238 2SA933S
Q331 KSA812
Q332 2SC1740S
Q334 2SC3504E
Q335 2SA1031
Q336 2SC1740S
Q337 2SC1740S
Q338 2SA933S
XIC009 NJM324D
Q159 KSC1623
Q359 KSC1623
Q259 KSC1623
Q151 2SC3955E
Q152 2SA1540E
Q153 2SC3789E
Q154 2SA1479E
Q156 2SC3941-Q/R
Q157 2SC3941-Q/R
Q251 2SC3955E
Q252 2SA1540E
Q253 2SC3789E
Q254 2SA1479E
Q256 2SC3941-Q/R
Q257 2SC3941-Q/R
Q351 2SC3955E
Q352 2SA1540E
Q353 2SC3789E
Q354 2SA1479E
Q356 2SC3941-Q/R
Q357 2SC3941-Q/R
Q041 2SB1548
XIC010 HA17431P
CO-86N
CO-56N
R
NC
GND
TO C BOARD
CO-87N
CO-57N
G
NC
GND
TO C BOARD
CO-59N
TO C BOARD
CO-88N
CO-58N
B
NC
GND
TO C BOARD
BALANCE-R
BALANCE-G
BALANCE-B
CUT-OFF-G
CUT-OFF-R
CUT-OFF-B
VD CUT 1
REF. NO. is all 7XXX.
CO-65N
CO-55N
ABL
GND
NC
TO H-BOARD
CO-06N
BLK
GND
H12V
GND
+12V
GND
TO A-BOARD

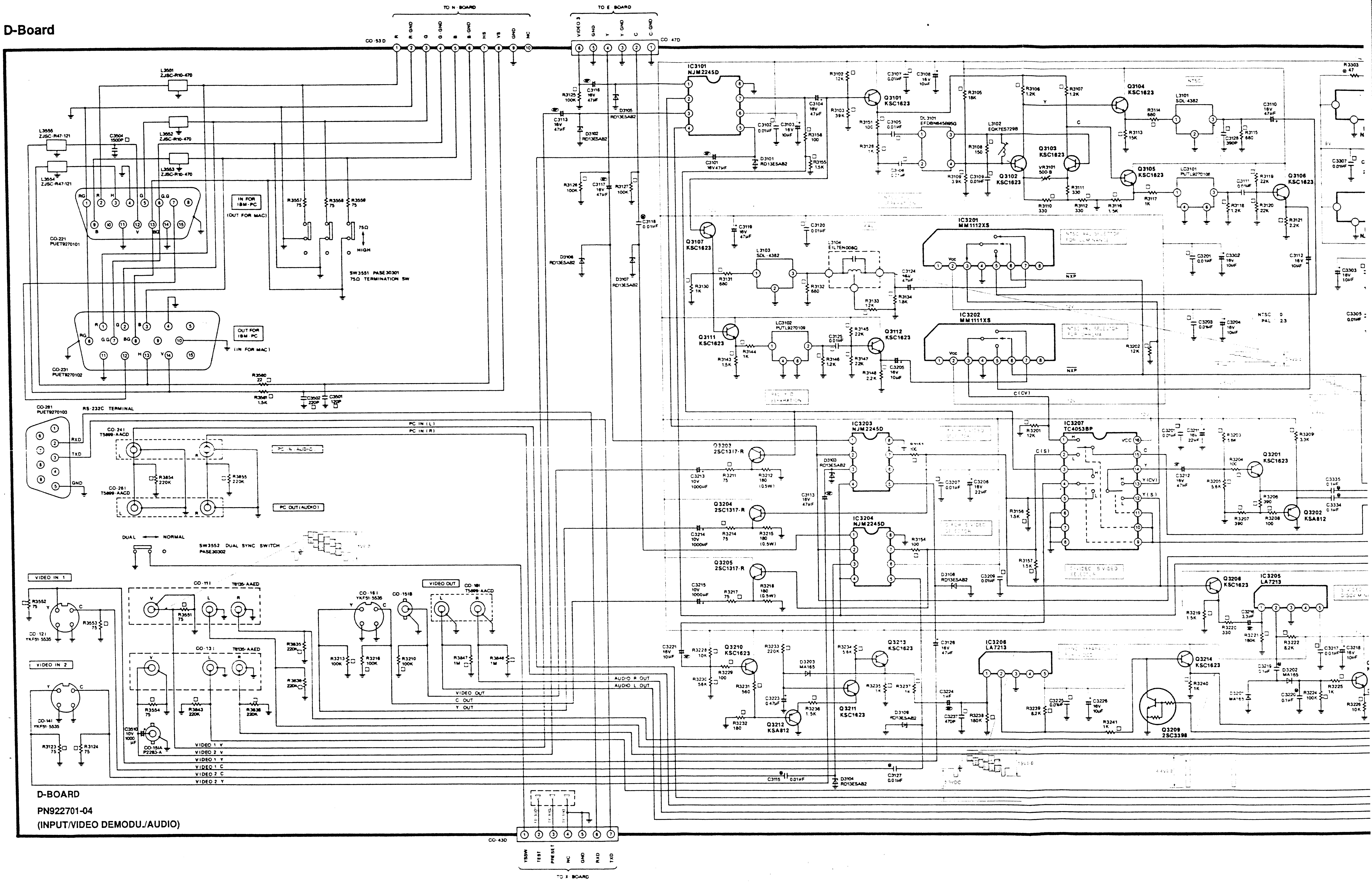
A-Board

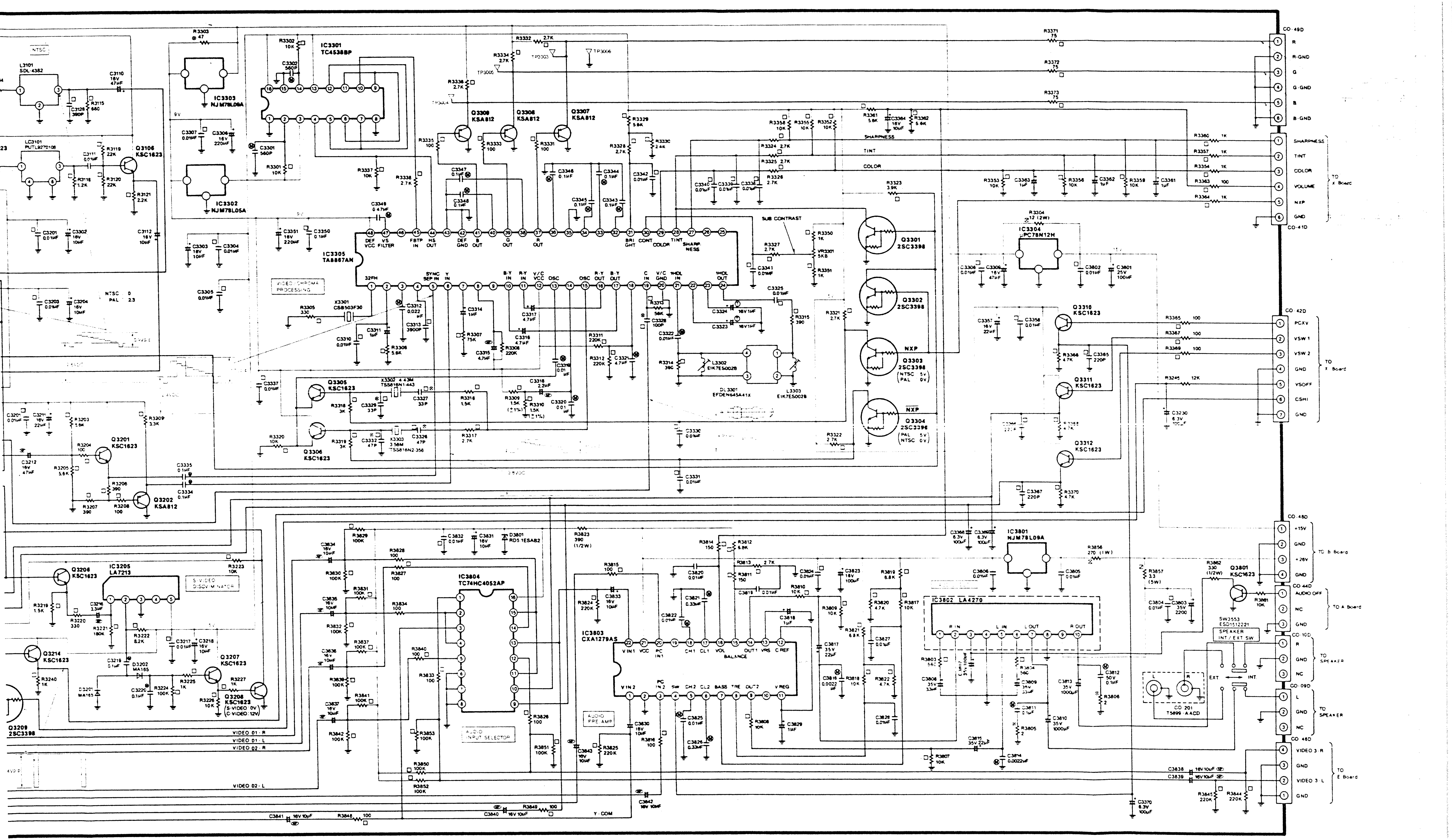

CO-03A
SPIN
TRPZD
GND
PCXV
VD CUT 2
H+B
XFHT
HDP
GND
V TRIG
XSVOJ
XSHOJ
TO X BOARD
CO-02A
GND
GND
(VD CUT 1)
(UPH 36)
UPH 29
UPH 51
(UPH 58)
H. LIN 1
H. LIN 2
H. LIN 3
H. LIN 4
H. LIN 5 (UPH 20)
TO X BOARD
CO-01A
GND
+12V
+12V (STAND BY)
ALD
CLK
DI
GND
V POMP UP
GND
V LIN 2
V LIN 1
TO X BOARD
Q401 2SA933S
Q402 2SC1740S
IC502 LA7852
VCC (V)
NC
GND (V)
XRAY
HD
H OSC
AFC
H SIZE
Q549 2SA933S
Q548 2SA933S
Q547 2SC2634-T
Q546 2SC1740S
Q545 2SA933S
IC504D NJM2901N
Q559 2SC1740S
Q550 2SA933S
Q501 2SC3402
IC504B NJM2901N
IC504C NJM2901N
Q561 2SC1740S
IC504A NJM2901N
IC503B NJM3404AD
Q541 2SC1740S
Q543 2SA933S
Q544 2SA933S
IC509A NJM3404AD
IC509B NJM3404AD
IC503A NJM3404AD
Q542 2SC1740S
Q555 2SC3402
Q558 2SA1348
H. CENT
H. OSC
A-BOARD
PN922701-01
(MAIN)
IC501 M62352P
VSS
GND
A03
A02
A04
A01
A05
DI
A06
CLK
A07
LD
A08
DO
A09
A12
A10
A11
VDD
VCC
IC508 HA17431P
Q557 2SC1740S
RD5.6ESAB2 × 3
IC404 NJM3404AD
Q517 2SA933S
Q413 2SB1548A
Q414 2SD2374A
IC401 LA7837
IC403 NJM78L12A
Q407 2SC1740S
Q405 2SC1740S
Q406 2SC1740S
Q415 2SA933S
Q403 2SC3402
Q404 2SC3402
Q408 2SK814
Q409 2SK814



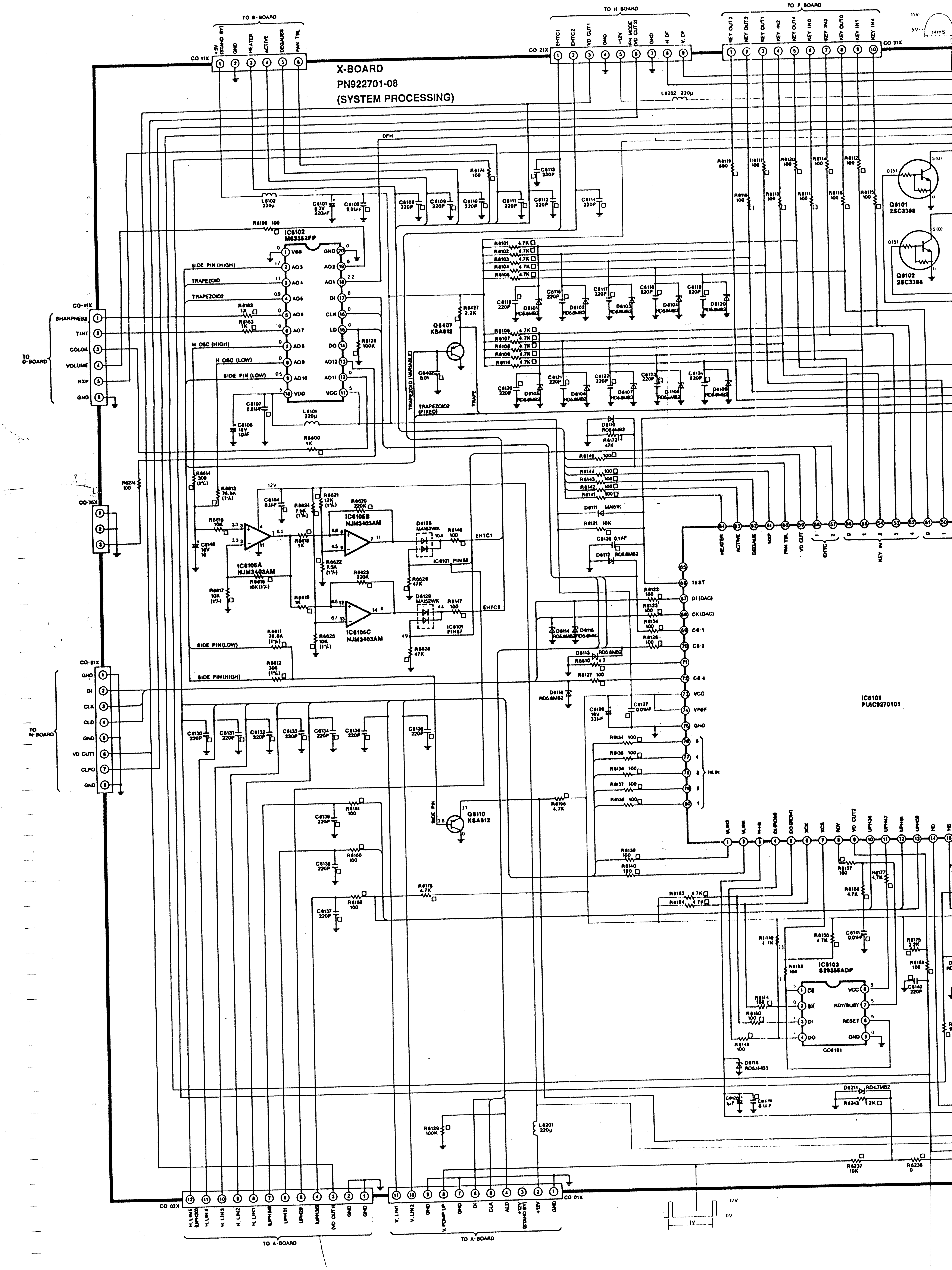
(UPH29)
R5136 4.7K
C550 50V 2.2µF
R5135 220K
R5121 12 (2W)
L506 3.3mH
C568 100V 100µF
C569 100V 100µF
L508 ELHKLB0106
RL501 VS-18MB-UL3
D541 MA165
Q553 2SC1740S
R5133 4.7K
R5185 10K
Q517 2SA933S
D523 MA165
D524 MA165
R5102 390
R5103 10K
C559 120P
C558 0.1µF
R5104 1K
C433 0.1µF
C422 0.1µF
R454 27K
R458 560
R441 27 (1W)
IC404 NJM3404AD
R456 27K
D409 RD9.1ESAB2
D408 RD9.1ESAB2
Q413 2SB1548A
Q414 2SD2374A
R487 8.2 (2W)
R455 27K
R457 27K
R459 560
R442 27 (1W)
R439 10K
C547 16V 330µF
Q516 2SC1740S
Q515 2SA933S
C546 16V 100µF
C589 250V 4.7µF
C590 250V 4.7µF
L503 6mH
T502 ETE13K73AY
C548 0.1µF
D521 MA165
C549 0.01µF
D520 RG4ALF-L1
D522 MA165
R5101 6.8K
R5100 5.6K
R596 47
Q513 2SK1642
Q561 2SD1446
C596 400V 4.7µF
C591 350V 22µF
R5186 100K (2W)
R5176 3.3K
T501 PUKF4083K
R5134 680 (2W)
D534 TVSRGP10J
R5182 680 (2W)
L509 ELHKLB0108
R5112 1.0 (0.5W)
R5113 3.3K
Q519 2SC1740S
D531 MA170
D530 RD12 ESAB1
R5114 6.8K
C565 63V 100µF
R5120 8.2 (2W)
L507 3.3mH
IC401 LA7837
IC402 LA7846
VCC OUT REF VCC PCMP
R410 4.7 (0.5W)
R426 1.2K
C406 35V 1000µF
R460 2.7K
D413 MA165
R462 180
D414 RD8.2ESAB2
C430 50V 33µF
Q418 2SA933S
R461 15K
C429 50V 4.7µF
C419 25V 47µF
C418 16V 470µF
Q407 2SC1740S
D418 RD5.6ESAB3
R427 2.7K
R431 22K
R468 1.2 (0.5W)
R597 5.6 (1W)
D401 RD5.6ESAB3
C417 1.0µF
R419 18K
R418 4.7K
Q405 2SC1740S
Q406 2SC1740S
R430 3.3K
Q419 2SC3402
R463 56K
R429
R448 1
C434 0.22µF
C410 0.22µF
R412 16.5K (1%)
R413 47
R416 39K (1%)
R417 39K (1%)
R420 47K (1%)
R421 30K (1%)
D405 EM1Z
Q412 MPSA43C
R432 3.3K (1W)
R579 56 (2W)
R411 2.2K
R414 10K
R415 10K
R466 5K8
R465 5K8
R446 5K8
V. LIN
C437 0.33µF
C415 0.47µF
C416 0.033µF
C413 0.68µF
R425 470 (0.5W)
Q408 2SK814
Q410 2SB940A-P
IC505 NJM78M12FA
C543 25V 100µF
D417 EM1Z
D407 EM1Z
C412 35V 470µF
C411 100V 4700P
R436 10K (2W)
C409 100V 10µF
R433 10K
Q404 2SC3402
D403 MA165
D402 MA165
R424 56K
R423 56K
Q409 2SK814
C436 35V 470µF
R422 0.68 (2W)
R437 270 (1W)
D416 MA165
Q411 2SD1264-P
R434 22K
R435 39K
L505 220µH
C542 25V 100µF
D404 MA165
D405 MA165
C426 16V 33µF
DY(V) DY(H) KY6UW301X
D529 D3S4M-04P15
IC504 NJM7805FA
Q520 2SD2375
R5183 0.33 (2W)
C563 25V 1500µF
D546 DINL20U
C566 35V 33µF
R5115 2.2K
D533 MA165
D532 MA165
R5119 2.2
R5118 2.2
C564 25V 560µF
D547 DINL20U
C567 35V 33µF
Q521 2SB1299-P
D528 D3S4M-04P15
IC507 NJM7905FA
R5116 5.6K
Q522 2SC3946
C562 16V 22µF
R5117 1K
R581 1.2K (5W)
Q510 2SD1264-P
R586 15K (1%)
C561 160V 10
R582 10 (1W)
R580 0.22 (0.5W)
R583 2.2K (1W)
R584 56K (1%)
Q512 2SC3402
C545 160V 22µF
Q511 MPSA43C
R585 3.3K (1%)
C560 16V 100µF
Q503 2SC1740S
R587 27
Q504 2SA933S
Q505 2SK1351
C544 25V 10µF
Q528 2SK1642
Q529 2SK1642
C570 400V 1.2µF
R5127 22K (0.5W)
R5122 10K
(H. LIN5)
Q523 2SC3399
C577 25V 10µF
Q530 2SK1642
Q531 2SK1642
C571 400V 0.47µF
R5129 22K (0.5W)
R5123 10K
(H. LIN4)
Q532 2SK1642
Q524 2SC3399
C578 25V 10µF
Q533 2SK1642
C572 400V 0.18µF
R5130 22K (0.5W)
R5124 10K
(H. LIN3)
Q534 2SK1642
Q525 2SC3399
C579 25V 10µF
Q535 2SK1642
C573 400V 0.12µF
R5131 22K (0.5W)
R5125 10K
(H. LIN2)
Q536 2SK1642
Q526 2SC3399
C580 25V 10µF
Q538 2SK1642
C574 400V 0.047µF
R5126 10K
(H. LIN1)
R5132 22K (0.5W)
C575 1250V 0.12µF
Q527 2SC3399
C581 25V 10µF
R593 1K
D535 RD15ESAB2
C582 16V 10
R594 10K
R592 1.5 (1W)
Q508 2SK1033
(UPH29)
Q509 2SC3402
R5180 1.5 (1W)
D540 FMP-G5HS
C585 (3%) 1.8KV 1000pF
D536 RD18ESAB2
Q514 2SC5144
C586 (3%) 1.8KV 6800pF
T503 ETH24K45AY
D537 EK16
R590 2.2 (7W)
R591 27 (1W)
R5179 27 (1W)
R5181 15 (2W)
R5147 15 (2W)
R588 3.3K (2W)
R596 10K
C584 1KV 470P
R595 1K
C583 16V 10µF
D538 RD15ESAB2
Q507 2SK1033
D539 RD18ESAB2
Q506 2SC3402
11.7V 11.2V 20.8µs 0V 16.5V 10V 1V 17.6V 11.6V 0.3V 252V 32.4V 13.9ms 3.6V 5.0V 838mV 11.6V 22.5V 16.8V 0.8V 8.4V 0.2V 12V 215V 1450V 6.4V 14.1V 119V 109V
CO-05A
① +260V
② NC
③ +125V
④ NC
⑤ +32V
⑥ +15V
⑦ GND (+260V +125V)
⑧ GND (+32V)
⑨ GND (+15V)
⑩ +12V (STAND BY)
⑪ GND (+12V STAND BY)
TO B-BOARD
CO-44A
① AUDIO OFF
② NC
③ GND
TO D-BOARD
CO-06A
① BLK
② GND
③ +12V
④ GND
⑤ +12V (STAND BY)
⑥ GND
TO N-BOARD
CO-08A
① HD
② GND
③ SAWTOOTH
④ GND
⑤ FB HV DRIVE
⑥ GND
⑦ BEAM SHUT DOWN
TO H-BOARD

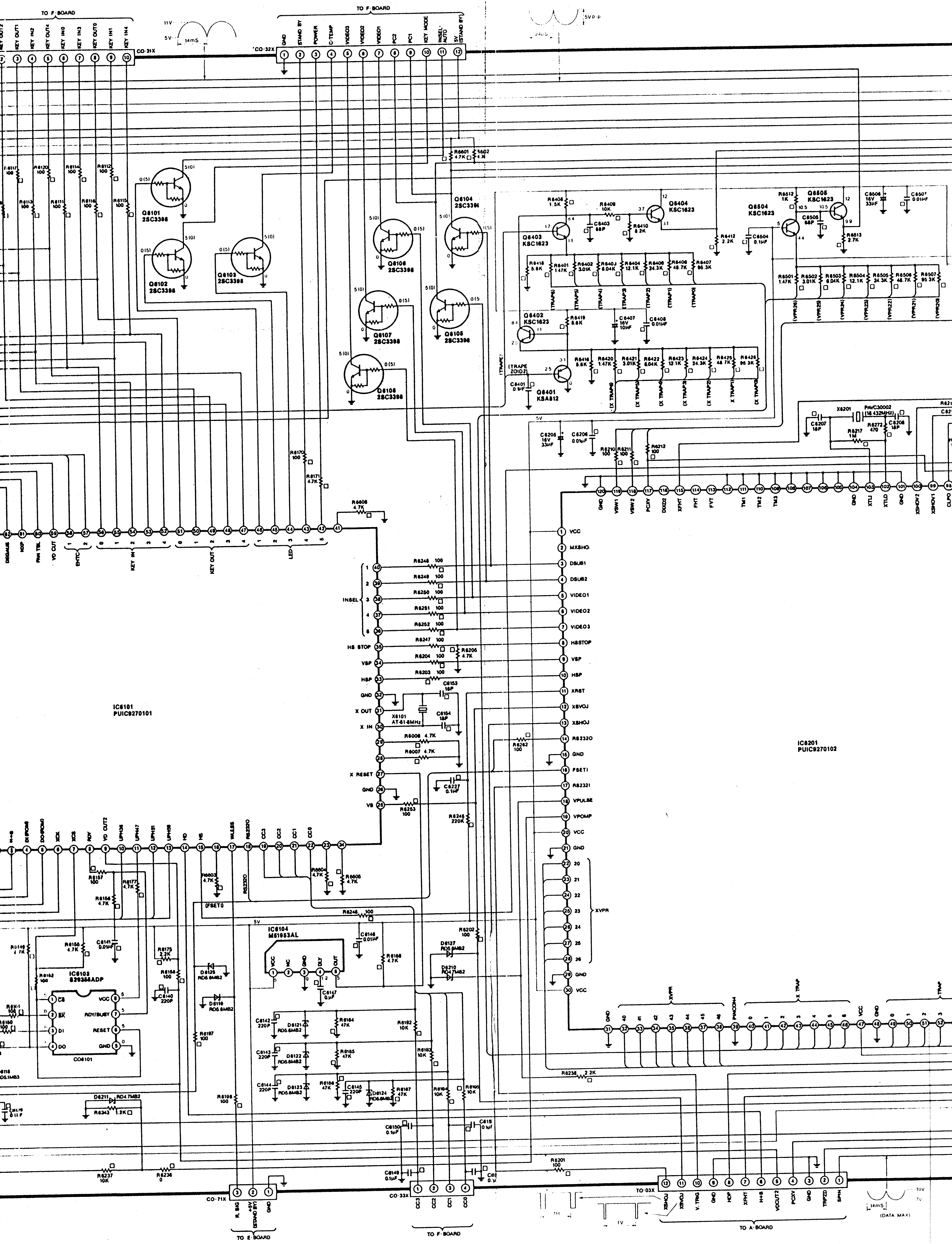
D-Board

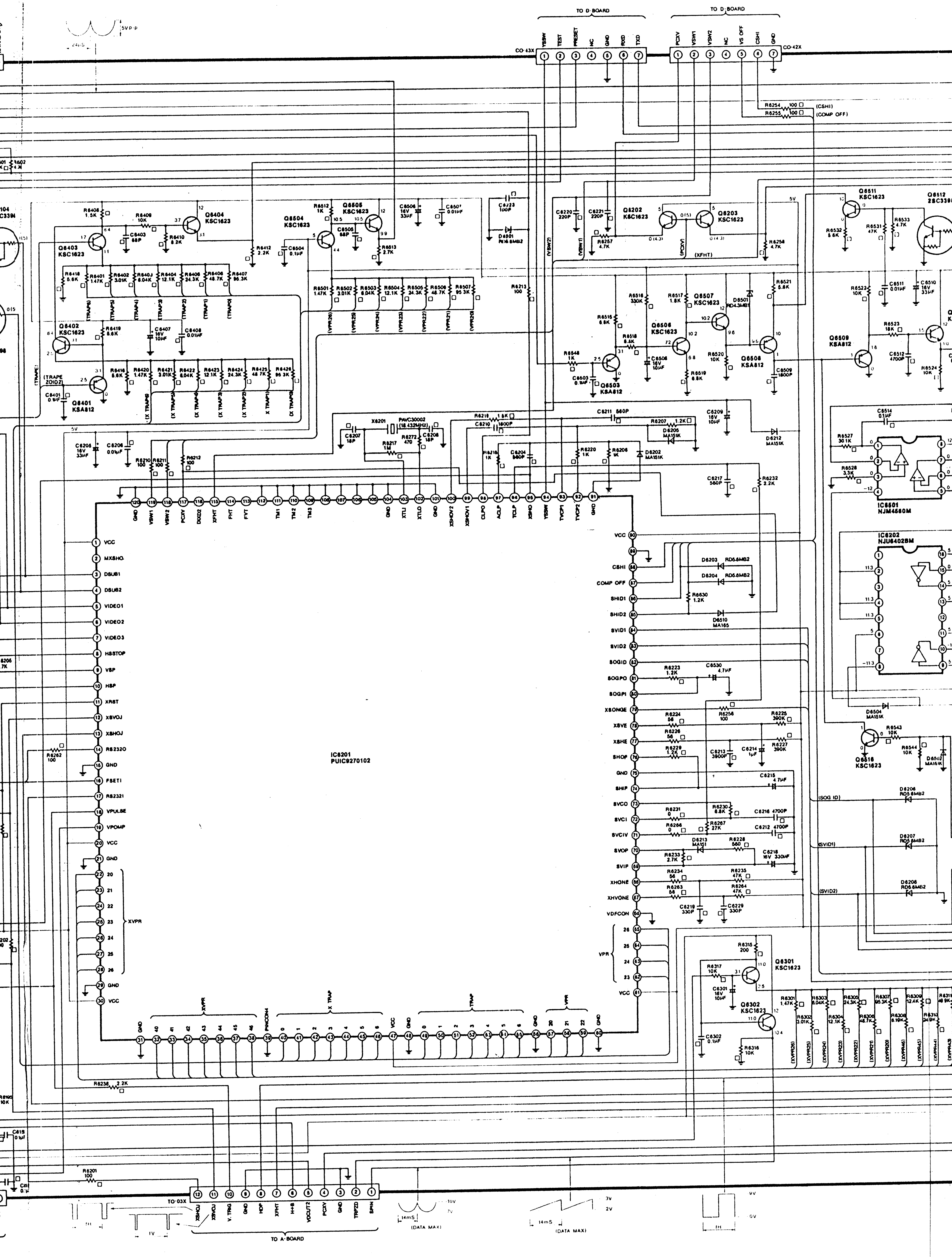

TO N BOARD
R
R GND
G
G GND
B
B GND
HS
VS
GND
NC
CO-53D
TO E BOARD
VIDEO 3
GND
Y
Y GND
C
C GND
CO-47D
L3551 ZJSC-R10-470
L3552 ZJSC-R10-470
L3553 ZJSC-R10-470
L3555 ZJSC-R47-121
L3554 ZJSC-R47-121
C3504 1500P
CO-221 PUET9270101
IN FOR IBM-PC
(OUT FOR MAC)
R3557 75
R3558 75
R3559 75
75Ω
HIGH
SW3551 PASE30301 75Ω TERMINATION SW
CO-231 PUET9270102
OUT FOR IBM-PC
(IN FOR MAC)
R3560 22
R3561 1.5K
C3502 220P
C3501 120P
CO-281 PUET9270103
RS-232C TERMINAL
RXD
TXD
GND
CO-241 T5899-AACD
CO-261 T5899-AACD
PC IN (L)
PC IN (R)
PC IN AUDIO
PC OUT (AUDIO)
R3854 220K
R3855 220K
DUAL NORMAL
SW3552 DUAL SYNC SWITCH PASE30302
VIDEO IN 1
VIDEO IN 2
CO-121 YKF51-5535
CO-141 YKF51-5535
R3552 75
R3553 75
R3123 75
R3124 75
CO-111 T8135-AAED
CO-131 T8135-AAED
R3551 75
R3554 75
R3843 220K
R3838 220K
C3510 10V 1000μF
CO-151A P2263-A
CO-161 YKF51-5535
CO-151B
VIDEO OUT
CO-181 T5899-AACD
R3213 100K
R3216 100K
R3210 100K
R3847 1M
R3848 1M
R3835 220K
R3836 220K
AUDIO R OUT
AUDIO L OUT
VIDEO OUT
C OUT
Y OUT
VIDEO 1 V
VIDEO 2 V
VIDEO 1 Y
VIDEO 1 C
VIDEO 2 C
VIDEO 2 Y
D-BOARD
PN922701-04
(INPUT/VIDEO DEMODU./AUDIO)
CO-43D
YSSW
TEST
PRESET
NC
GND
RXD
TXD
TO X BOARD
IC3101 NJM2245D
C3116 16V 47μF
R3125 100K
D3105 RD13ESAB2
C3113 16V 47μF
D3102 RD13ESAB2
C3101 16V 47μF
D3101 RD13ESAB2
R3126 100K
C3117 16V 47μF
R3127 100K
C3118 0.01μF
D3106 RD13ESAB2
D3107 RD13ESAB2
R3102 12K
C3107 0.01μF
C3108 16V 10μF
Q3101 KSC1623
C3104 16V 47μF
R3103 39K
C3102 0.01μF
C3103 16V 10μF
R3158 100
R3155 1.5K
R3151 100
R3128 1K
C3105 0.01μF
C3106
DL3101 EFDBN645B95G
R3105 18K
R3106 1.2K
R3107 1.2K
L3102 EQK7ES729B
R3108 150
Q3102 KSC1623
Q3103 KSC1623
VR3101 500-B
R3109 3.9K
C3109 0.01μF
R3110 330
R3111 330
R3112 330
R3116 1.5K
Q3104 KSC1623
R3114 680
R3113 15K
L3101 SDL-4382
NTSC
C3128 390P
R3115 680
C3110 16V 47μF
Q3105 KSC1623
R3117 1K
LC3101 PUTL9270108
C3111 0.01μF
R3118 1.2K
R3119 22K
R3120 22K
Q3106 KSC1623
R3121 2.2K
C3112 16V 10μF
R3303 47
C3307 0.01μF
C3303 16V 10μF
C3305 0.01μF
Q3107 KSC1623
C3119 16V 47μF
C3120 0.01μF
L3103 SDL-4382
R3130 1K
R3131 680
R3132 680
L3104 EIL7EN008Q
C3124 16V 47μF
R3133 12K
R3134 1.8K
IC3201 MM1112XS
VCC
NXP
C3201 0.01μF
C3202 16V 10μF
NTSC/PAL SELECTOR FOR LUMINANCE
IC3202 MM1111XS
NTSC/PAL SELECTOR FOR CHROMA
C3203 0.01μF
C3204 16V 10μF
NTSC 0
PAL 2.3
R3202 12K
Q3111 KSC1623
LC3102 PUTL9270109
R3144 1K
R3143 1.5K
R3145 22K
C3125 0.01μF
R3146 1.2K
R3147 22K
R3148 2.2K
Q3112 KSC1623
C3205 16V 10μF
C(CV)
IC3203 NJM2245D
Q3203 2SC1317-R
D3103 RD13ESAB2
C3213 10V 1000μF
R3211 75
R3212 180 (0.5W)
C3113 16V 47μF
Q3204 2SC1317-R
C3214 10V 1000μF
R3214 75
R3215 180 (0.5W)
IC3204 NJM2245D
R3154 100
Q3205 2SC1317-R
C3215 10V 1000μF
R3217 75
R3218 180 (0.5W)
D3108 RD13ESAB2
C3209 0.01μF
C3207 0.01μF
C3206 16V 22μF
R3201 12K
IC3207 TC4053BP
C(S)
VCC
Y
Y(CV)
Y(S)
R3156 1.5K
R3157 1.5K
C3208 0.01μF
C3211 16V 22μF
R3203 5.6K
R3209 3.3K
C3212 16V 47μF
R3204 10K
R3205 5.6K
Q3201 KSC1623
R3206 390
R3207 390
R3208 100
Q3202 KSA812
C3335 0.1μF
C3334 0.1μF
Q3208 KSC1623
IC3205 LA7213
R3219 1.5K
C3216 3.3μF
R3220 330
R3221 180K
R3222 8.2K
C3217 0.01μF
C3218 16V 10μF
C3221 16V 10μF
R3228 10K
Q3210 KSC1623
R3229 100
R3230 56K
R3231 560
R3233 220K
D3203 MA165
R3234 5.6K
Q3213 KSC1623
C3223 0.47μF
Q3211 KSC1623
R3235 1K
R3237 1K
R3236 1.5K
Q3212 KSA812
R3232 180
D3109 RD13ESAB2
C3126 16V 47μF
C3224 1μF
C3237 470P
R3238 180K
IC3206 LA7213
R3239 8.2K
C3225 0.01μF
C3226 16V 10μF
R3241 1K
Q3209 2SC3398
Q3214 KSC1623
R3240 1K
C3219 0.1μF
D3202 MA165
D3201 MA165
C3220 0.1μF
R3224 100K
R3225 1K
R3226 10K
C3115 0.01μF
D3104 RD13ESAB2
C3127 0.01μF


IC3301 TC4538BP
IC3302 NJM78L05A
IC3303 NJM78L09A
IC3304 PC78N12H
IC3305 TA8667AN
IC3205 LA7213
IC3804 TC74HC4052AP
IC3803 CXA1279AS
IC3801 NJM78L09A
IC3802 LA4270
Q3106 KSC1623
Q3201 KSC1623
Q3202 KSA812
Q3206 KSC1623
Q3207 KSC1623
Q3208 KSC1623
Q3214 KSC1623
Q3209 2SC3398
Q3305 KSC1623
Q3306 KSC1623
Q3307 KSA812
Q3308 KSA812
Q3309 KSA812
Q3301 2SC3398
Q3302 2SC3398
Q3303 2SC3398
Q3304 2SC3396
Q3310 KSC1623
Q3311 KSC1623
Q3312 KSC1623
Q3801 KSC1623
L3101 SDL-4382
LC3101 PUTL9270108
NTSC
VIDEO/CHROMA PROCESSING
S-VIDEO DISCRIMINATOR
AUDIO INPUT SELECTOR
AUDIO PRE AMP
SUB CONTRAST
SHARPNESS
TINT
COLOR
DL3301 EFDEN645A41X
L3302 EIK7ES002B
L3303 EIK7ES002B
X3301 CSB503F30
X3302 4.43M TSS816N1-443
X3303 3.58M TSS816N2-356
NXP
NTSC 5V PAL 0V
PAL 5V NTSC 0V
NTSC 0 PAL 2.3
S-VIDEO 0V C-VIDEO 12V
VIDEO 01-R
VIDEO 01-L
VIDEO 02-R
VIDEO 02-L
Y-COM
SW3553 ESD1512221 SPEAKER INT/EXT SW
EXT
INT
CO-201 TS899-AACD
CO-49D
R
R-GND
G
G-GND
B
B-GND
SHARPNESS
TINT
COLOR
VOLUME
NXP
GND
CO-41D
TO X Board
CO-42D
PCXV
VSW 1
VSW 2
GND
YSOFF
CSHI
GND
TO X Board
CO-48D
+15V
GND
+26V
GND
TO B Board
CO-44D
AUDIO OFF
NC
GND
TO A Board
CO-10D
R
GND
NC
TO SPEAKER
CO-09D
L
GND
NC
TO SPEAKER
CO-46D
VIDEO 3-R
GND
VIDEO 3-L
GND
TO E Board

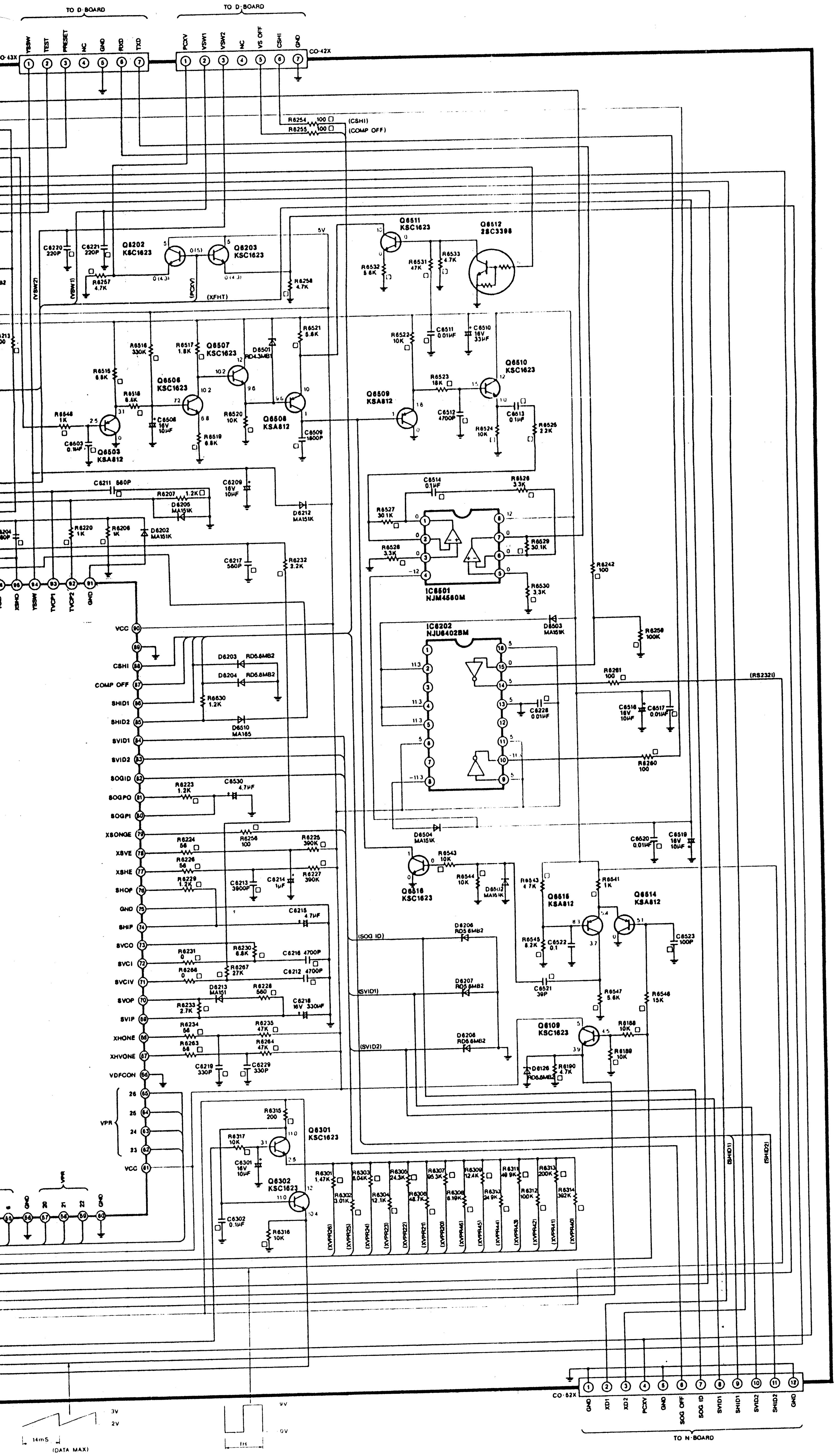
X-Board


X-BOARD
PN922701-08
(SYSTEM PROCESSING)
TO B-BOARD
CO-11X
+5V (STAND BY)
GND
HEATER
ACTIVE
DEGAUSS
FAN TBL
TO H-BOARD
CO-21X
EHTC1
EHTC2
VD CUT1
GND
-12V
FH MODE (VD CUT 2)
GND
H DF
V DF
TO F-BOARD
CO-31X
KEY OUT3
KEY OUT2
KEY OUT1
KEY IN2
KEY OUT4
KEY IN0
KEY IN3
KEY OUT0
KEY IN1
KEY IN4
11V
5V
14mS
L6202 220μ
DFH
R6174 100
C6113 220P
L6102 220μ
C6101 6.3V 220μF
C6102 0.01μF
C6108 220P
C6109 220P
C6110 220P
C6111 220P
C6112 220P
C6114 220P
R6199 100
IC6102
M62352FP
VSS
GND
SIDE PIN (HIGH)
AO3
AO2
AO4
AO1
TRAPEZOID
AO5
DI
TRAPEZOID2
AO6
CLK
AO7
LD
H OSC (HIGH)
AO8
DO
H OSC (LOW)
AO9
AO12
SIDE PIN (LOW)
AO10
AO11
VDD
VCC
R6162 1K
R6163 1K
R6128 100K
C6107 0.01μF
C6106 16V 10μF
L6101 220μ
R6600 1K
CO-41X
TO D-BOARD
SHARPNESS
TINT
COLOR
VOLUME
NXP
GND
R6427 2.2K
Q6437 KSA812
C6402 0.01
TRAPEZOID (VARIABLE)
TRAPEZOID2 (FIXED)
TRAPE
R6101 4.7K
R6102 4.7K
R6103 4.7K
R6104 4.7K
R6105 4.7K
C6115 220P
C6116 220P
C6117 220P
C6118 220P
C6119 220P
D6101 RD6.8MB2
D6102 RD6.8MB2
D6103 RD6.8MB2
D6104 RD6.8MB2
D6120 RD6.8MB2
R6106 4.7K
R6107 4.7K
R6108 4.7K
R6109 4.7K
R6110 4.7K
C6120 220P
C6121 220P
C6122 220P
C6123 220P
C6124 220P
D6105 RD6.8MB2
D6106 RD6.8MB2
D6107 RD6.8MB2
D6108 RD6.8MB2
D6109 RD6.8MB2
R6119 680
R6117 100
R6120 100
R6114 100
R6112 100
R6118 100
R6113 100
R6111 100
R6116 100
R6115 100
Q6101 2SC3398
Q6102 2SC3398
D6110 RD6.8MB2
R6172 47K
R6145 100
R6144 100
R6143 100
R6142 100
R6141 100
D6111 MA151K
R6121 10K
C6125 0.1μF
D6112 RD6.8MB2
R6274 100
CO-75X
12V
C6104 0.1μF
R6624 7.5K (1%)
R6621 12K (1%)
R6620 220K
IC6105B NJM3403AM
R6614 300 (1%)
R6613 76.8K (1%)
R6615 10K
C6148 16V 10
IC6105A NJM3403AM
R6616 10K (1%)
R6617 10K (1%)
R6618 1K
R6622 7.5K (1%)
R6623 220K
R6619 1K
IC6105C NJM3403AM
R6625 10K (1%)
D6128 MA152WK
R6146 100
EHTC1
IC6101 PIN58
R6629 47K
D6129 MA152WK
R6147 100
EHTC2
IC6101 PIN57
R6628 47K
R6611 76.8K (1%)
R6612 300 (1%)
SIDE PIN (LOW)
SIDE PIN (HIGH)
CO-81X
TO N-BOARD
GND
DI
CLK
CLD
GND
VD CUT1
CLPO
GND
HEATER
ACTIVE
DEGAUS
NXP
FAN TBL
VD CUT
EHTC 1 2
KEY IN 0 1 2 3 4
TEST
DI (DAC)
CK (DAC)
CS-1
CS-2
CS-4
VCC
VREF
GND
HL IN
R6122 100
R6123 100
R6124 100
R6125 100
D6114 RD6.8MB2
D6115 RD6.8MB2
D6113 RD6.8MB2
R6810 4.7
R6127 100
D6116 RD6.8MB2
C6126 16V 33μF
C6127 0.01μF
R6134 100
R6135 100
R6136 100
R6137 100
R6138 100
IC6101
PUIC9270101
C6130 220P
C6131 220P
C6132 220P
C6133 220P
C6134 220P
C6135 220P
C6136 220P
C6139 220P
R6161 100
SIDE PIN
Q6110 KSA812
R6196 4.7K
C6138 220P
R6160 100
C6137 220P
R6159 100
R6176 4.7K
VLIN2
VLIN1
DI (ROM)
DO (ROM)
SCK
SCS
RDY
VD OUT2
UPH36
UPH47
UPH51
UPH56
HD
R6139 100
R6140 100
R6157 100
R6177 4.7K
R6158 4.7K
R6153 4.7K
R6154 4.7K
R6149 4.7K
R6155 4.7K
C6141 0.01μF
R6175 2.2K
R6152 100
IC6103
S29355ADP
CS
SK
DI
DO
VCC
RDY/BUSY
RESET
GND
CO6101
C6140 220P
R6151 100
R6150 100
R6148 100
D6118 RD5.1MB3
D6211 RD4.7MB2
R6343 1.2K
R6129 100K
L6201 220μ
R6237 10K
R6236 0
CO-02X
H. LIN5 (UPH22)
H. LIN4
H. LIN3
H. LIN2
H. LIN1
(UPH56)
UPH51
UPH29
(UPH36)
(VD OUT1)
GND
GND
TO A-BOARD
CO-01X
V. LIN1
V. LIN2
GND
V. PUMP UP
GND
DI
CLK
ALD
+5V (STAND BY)
+12V
GND
TO A-BOARD
32V
0V
1V

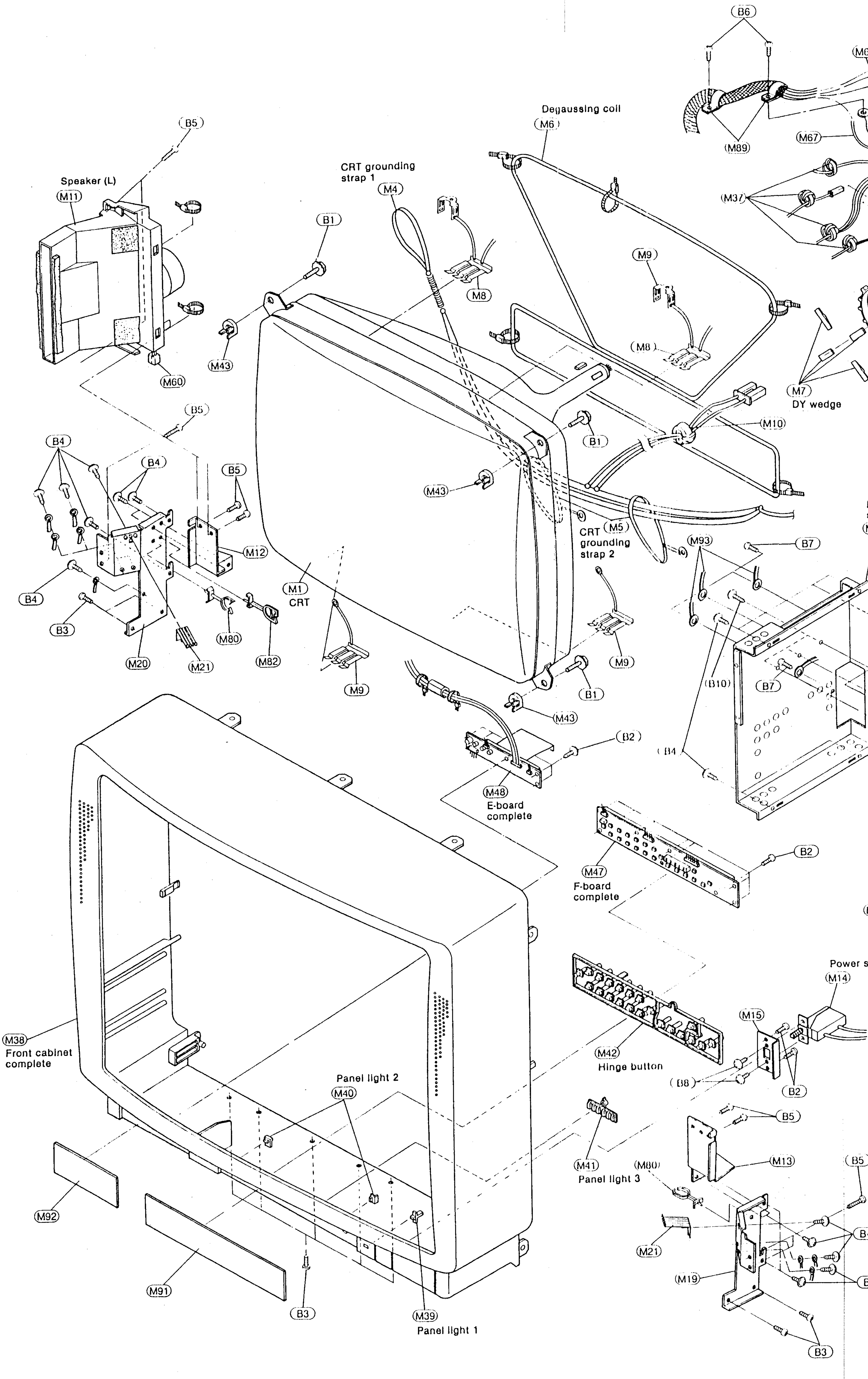

TO F-BOARD
KEY OUT2
KEY OUT1
KEY IN2
KEY OUT4
KEY IN0
KEY IN3
KEY OUT0
KEY IN1
KEY IN4
CO-31X
11V
5V
14mS
TO F-BOARD
CO-32X
GND
STAND BY
POWER
C-TEMP
VIDEO3
VIDEO2
VIDEO1
PC2
PC1
KEY MODE
INSEL-AUTO
5V (STAND BY)
5Vp-p
Q6101 2SC3398
Q6102 2SC3398
Q6103 2SC3398
Q6104 2SC3398
Q6105 2SC3398
Q6106 2SC3398
Q6107 2SC3398
Q6108 2SC3398
R6601 4.7K
R6602 4.7K
Q6401 KSA812
Q6402 KSC1623
Q6403 KSC1623
Q6404 KSC1623
Q6504 KSC1623
Q6505 KSC1623
(TRAPEZOID2)
(TRAP6) (TRAP5) (TRAP4) (TRAP3) (TRAP2) (TRAP1) (TRAP0)
(X TRAP6) (X TRAP5) (X TRAP4) (X TRAP3) (X TRAP2) (X TRAP1) (X TRAP0)
(VPR26) (VPR25) (VPR24) (VPR23) (VPR22) (VPR21) (VPR20)
X6201 PAVC30002 (18.432MHz)
IC6101 PUIC9270101
IC6201 PUIC9270102
DEGAUS
NOP
FAN TBL
VD OUT
ENTC
KEY IN
KEY OUT
LED
INSEL
HS STOP
VSP
HSP
GND
X OUT
X IN
X6101 AT-51-8MHz
X RESET
VS
VCC
MXSHO
DSUB1
DSUB2
VIDEO1
VIDEO2
VIDEO3
HSSTOP
XRST
XSVOJ
XSHOJ
RS232O
FSETI
RS232I
VPULSE
VPOMP
XVPR
PINCON4
X TRAP
VSW1
VSW2
PCXV
DOD2
XFHT
FHT
FVT
TM1
TM2
TM3
XTLI
XTLO
XSHOV2
XSHOV1
CLPO
H+8
DI (ROM)
DO (ROM)
XCK
XCS
RDY
VD OUT2
UPH36
UPH47
UPH91
UPH38
HD
HS
WLESS
RS232O
CC3
CC2
CC1
CC0
(FSET0)
IC6104 M51953AL
VCC NC GND DLY OUT
IC6103 S29355ADP
CS SK DI DO
VCC RDY/BUSY RESET GND
CO6101
D6211 RD4.7MB2
D6125 RD5.6MB2
D6116 RD5.6MB2
D6127 RD5.6MB2
D6210 RD4.7MB2
D6121 RD5.6MB2
D6122 RD5.6MB2
D6123 RD5.6MB2
D6124 RD5.6MB2
CO-71X
R.SIG
+5V (STAND BY)
GND
TO E-BOARD
CO-33X
CC3 CC2 CC1 CC0
TO F-BOARD
TO-03X
XSHOJ
XSVOJ
V.TRIG
GND
HDP
XFHT
H+8
VDCUT2
PCXV
GND
TRPZD
SPIN
TO A-BOARD
1H
1V
10V
7V
14mS
(DATA MAX)

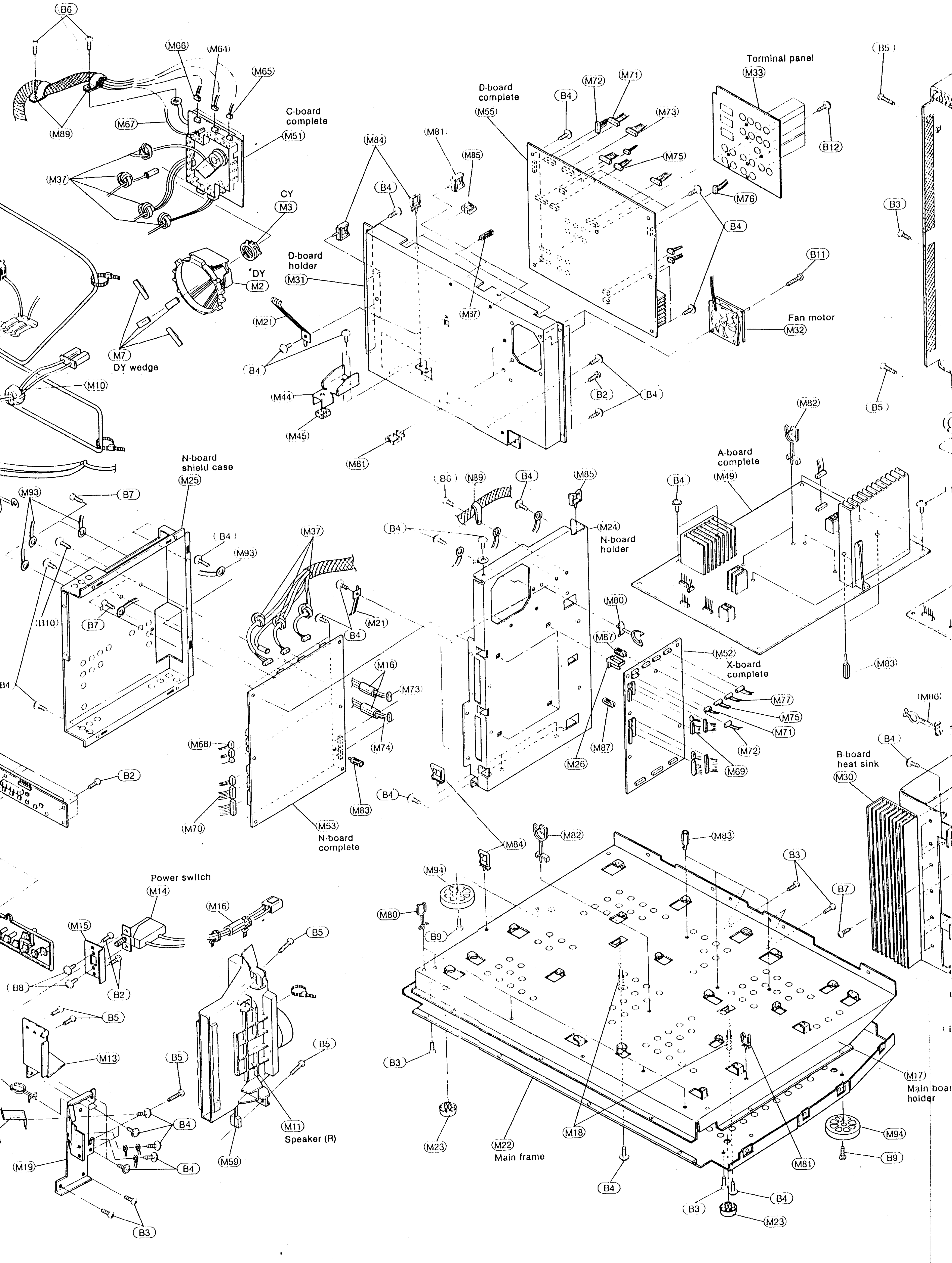


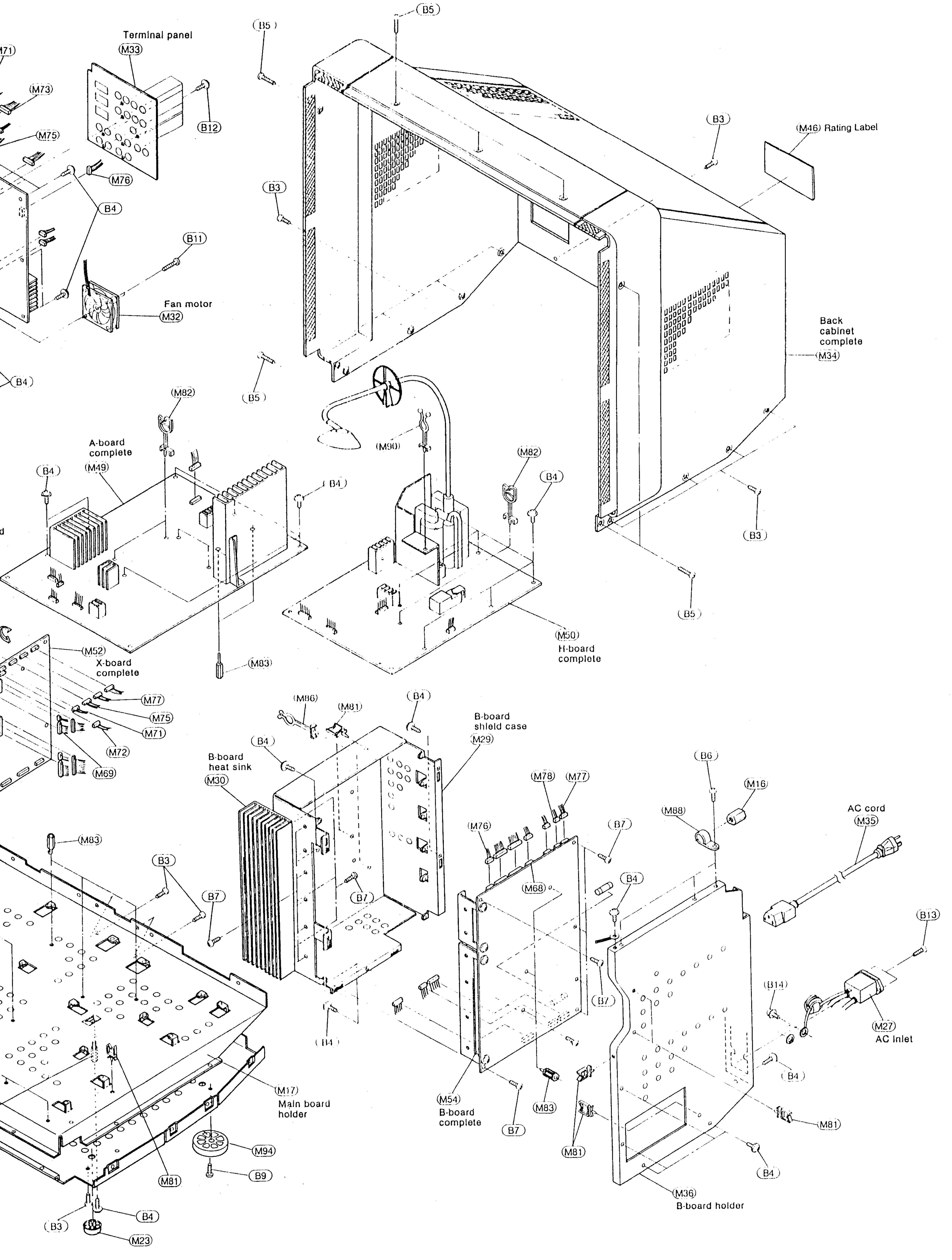
TO D-BOARD
CO-43X
YSSW
TEST
PRESET
NC
GND
RXD
TXD
TO D-BOARD
CO-42X
PCXV
VSW1
VSW2
NC
VS OFF
CSHI
GND
R6254 100
R6255 100
(CSHI)
(COMP OFF)
Q6404 KSC1623
Q6403 KSC1623
Q6402 KSC1623
Q6401 KSA812
Q6504 KSC1623
Q6505 KSC1623
Q6202 KSC1623
Q6203 KSC1623
Q6506 KSC1623
Q6507 KSC1623
Q6503 KSA812
Q6508 KSA812
Q6509 KSA812
Q6511 KSC1623
Q6512 2SC3398
X6201 PAVC30002 (18.432MHz)
D6201 RD16.8MB2
D6501 RD4.3MB1
D6202 MA151K
D6206 MA151K
D6212 MA151K
D6203 RD5.6MB2
D6204 RD5.6MB2
D6510 MA165
D6213 MA151
D6504 MA151K
D6502 MA151K
D6206 RD5.6MB2
D6207 RD5.6MB2
D6208 RD5.6MB2
IC6501 NJM4560M
IC6202 NJU6402BM
IC6201 PUIC9270102
VCC
MXSHO
DSUB1
DSUB2
VIDEO1
VIDEO2
VIDEO3
HSSTOP
VSP
HSP
XRST
XSVOJ
XSHOJ
RS232O
GND
FSETI
RS232I
VPULSE
VPOMP
VCC
GND
XVPR
CSHI
COMP OFF
SHID1
SHID2
SVID1
SVID2
SOGID
SOGPO
SOGPI
XSONGE
XSVE
XSHE
SHOP
GND
SHIP
SVCO
SVCI
SVCIV
SVOP
SVIP
XHONE
XHVONE
VDFCON
VPR
VCC
(SOG ID)
(SVID1)
(SVID2)
Q6301 KSC1623
Q6302 KSC1623
Q6510 KSC1623
TO-03X
XSHOJ
XSVOJ
V. TRIG
GND
HDP
XFHT
H+S
VDOUT2
PCXV
GND
TRPZD
SPIH
TO A-BOARD
(DATA MAX)
14mS
1H
1V
10V
7V
3V
2V
9V
0V
5VP-P

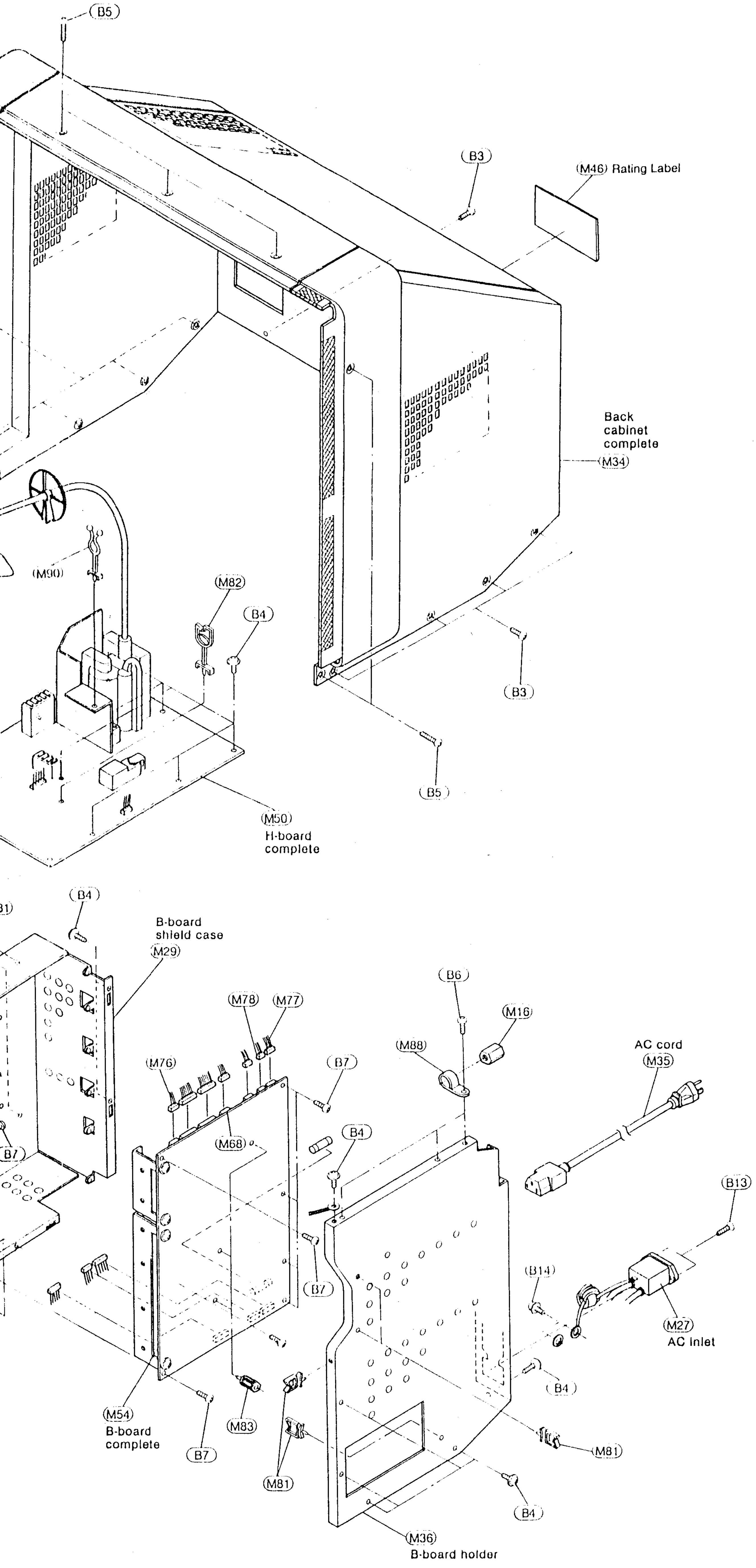

TO D-BOARD
YBSW
TEST
PRESET
NC
GND
RXD
TXD
CO-43X
TO D-BOARD
PCXV
VSW1
VSW2
NC
VS OFF
CSHI
GND
CO-42X
R6254 100 (CSHI)
R6255 100 (COMP OFF)
5V
Q6511 KSC1623
Q6512 2SC3398
R6532 5.6K
R6531 47K
R6533 4.7K
C6220 220P
C6221 220P
Q6202 KSC1623
Q6203 KSC1623
R6257 4.7K
R6258 4.7K
(VSW2)
(VSW1)
(PCXV)
(XFHT)
C6511 0.01μF
C6510 16V 33μF
R6522 10K
R6516 330K
R6517 1.8K
Q6507 KSC1623
D6501 RD4.3MB1
R6521 5.6K
Q6510 KSC1623
R6515 6.8K
Q6506 KSC1623
R6518 8.4K
R6523 18K
Q6509 KSA812
C6512 4700P
C6513 0.1μF
R6525 2.2K
R6524 10K
R6548 1K
C6506 16V 10μF
R6520 10K
Q6508 KSA812
C6509 1800P
R6519 6.8K
C6503 0.1μF
Q6503 KSA812
C6211 560P
R6207 1.2K
C6209 16V 10μF
D6205 MA151K
D6212 MA151K
C6514 0.1μF
R6526 3.3K
R6527 30.1K
R6529 30.1K
R6528 3.3K
IC6501 NJM4560M
R6530 3.3K
R6220 1K
R6206 1K
D6202 MA151K
C6217 560P
R6232 2.2K
R6242 100
XSHO
YBSW
TVCP1
TVCP2
GND
VCC
CSHI
COMP OFF
SHID1
SHID2
SVID1
SVID2
SOGID
SOGPO
SOGPI
XSONGE
XSVE
XSHE
SHOP
GND
SHIP
SVCO
SVCI
SVCIV
SVOP
SVIP
XHONE
XHVONE
VDFCON
VPR
VCC
D6203 RD5.6MB2
D6204 RD5.6MB2
R6630 1.2K
D6510 MA165
IC6202 NJU6402BM
D6503 MA151K
R6259 100K
R6261 100
(RS232I)
C6516 16V 10μF
C6517 0.01μF
C6226 0.01μF
R6260 100
R6223 1.2K
C6530 16V 4.7μF
R6256 100
R6224 56
R6225 390K
R6226 56
R6227 390K
R6229 1.2K
C6213 3900P
C6214 1μF
C6215 4.7μF
R6231 0
R6230 6.8K
C6216 4700P
R6266 0
R6267 27K
C6212 4700P
D6213 MA151
R6228 560
R6233 2.7K
C6218 16V 330μF
R6234 56
R6235 47K
R6263 56
R6264 47K
C6219 330P
C6229 330P
D6504 MA151K
R6543 10K
Q6516 KSC1623
R6544 10K
D6502 MA151K
C6520 0.01μF
C6519 16V 10μF
R6543 4.7K
R6541 1K
Q6515 KSA812
Q6514 KSA812
(SOG ID)
D6206 RD5.6MB2
R6545 8.2K
C6522 0.1
C6523 100P
(SVID1)
D6207 RD5.6MB2
C6521 39P
R6547 5.6K
R6546 15K
(SVID2)
D6208 RD5.6MB2
Q6109 KSC1623
R6188 10K
R6189 10K
D6126 RD5.6MB2
R6190 4.7K
R6315 200
Q6301 KSC1623
R6317 10K
C6301 16V 10μF
Q6302 KSC1623
C6302 0.1μF
R6316 10K
R6301 1.47K
R6302 3.01K
R6303 6.04K
R6304 12.1K
R6305 24.3K
R6306 48.7K
R6307 95.3K
R6308 6.19K
R6309 12.4K
R6310 24.9K
R6311 49.9K
R6312 100K
R6313 200K
R6314 392K
(XVPR26)
(XVPR25)
(XVPR24)
(XVPR23)
(XVPR22)
(XVPR21)
(XVPR20)
(XVPR46)
(XVPR45)
(XVPR44)
(XVPR43)
(XVPR42)
(XVPR41)
(XVPR40)
(SHID1)
(SHID2)
26
25
24
23
GND
20
21
22
GND
3V
2V
14mS
(DATA MAX)
9V
0V
fH
CO-52X
GND
XD1
XD2
PCXV
GND
SOG OFF
SOG ID
SVID1
SHID1
SVID2
SHID2
GND
TO N-BOARD

EXPLODED VIEWS


B6
M89
M67
M37
Degaussing coil
M6
B5
Speaker (L)
M11
M60
CRT grounding strap 1
M4
B1
M43
M8
M9
M8
M7
DY wedge
M10
B1
M43
CRT grounding strap 2
M5
M93
B7
B5
B4
B4
B5
M12
B4
B3
M20
M21
M80
M82
M1
CRT
M9
M9
B1
M43
B10
B7
B2
B4
M48
E-board complete
M47
F-board complete
B2
Power s
M14
M15
M42
Hinge button
B8
B2
M38
Front cabinet complete
Panel light 2
M40
B5
M13
B5
M41
Panel light 3
M80
M21
M19
M92
M91
B3
M39
Panel light 1
B3


B6
M66
M64
M65
M89
M67
C-board complete
M51
M37
CY
M3
DY
M2
M7
DY wedge
M10
D-board complete
M55
B4
M72
M71
M73
M75
Terminal panel
M33
B12
M76
B5
B3
M84
M81
M85
D-board holder
M31
M21
M44
M45
M81
B2
B11
Fan motor
M32
M82
A-board complete
M49
N-board shield case
M25
M93
B7
B10
B6
N89
M85
M24
N-board holder
M80
M87
M52
X-board complete
M77
M75
M71
M72
M69
M26
M83
M86
B-board heat sink
M30
M16
M73
M74
M68
M70
M53
N-board complete
M84
M82
M83
M94
M80
B9
Power switch
M14
M15
B8
M13
M19
M11
Speaker (R)
M59
M23
M22
Main frame
M18
M81
M17
Main board holder


(B5)
Terminal panel
(M33)
(M71)
(M73)
(B12)
(M75)
(M76)
(B4)
(B11)
Fan motor
(M32)
(B4)
(B5)
(B3)
(B5)
(B3)
(M46) Rating Label
Back cabinet complete
(M34)
(M82)
A-board complete
(M49)
(B4)
(B4)
(M90)
(M82)
(B4)
(B3)
(B5)
(M50)
H-board complete
(M52)
X-board complete
(M83)
(M77)
(M75)
(M71)
(M72)
(M69)
(M86)
(M81)
(B4)
B-board shield case
(M29)
(B4)
B-board heat sink
(M30)
(B6)
(M16)
(M78)
(M77)
(M88)
AC cord
(M35)
(M76)
(B7)
(M83)
(B3)
(B7)
(B7)
(M68)
(B4)
(B13)
(B7)
(B14)
(M27)
AC inlet
(B4)
(B4)
(M17)
Main board holder
(M54)
B-board complete
(B7)
(M83)
(M81)
(M81)
(B4)
(M94)
(B9)
(M81)
(M36)
B-board holder
(B4)
(B3)
(M23)


(B5)
(B3)
(M46) Rating Label
Back cabinet complete
(M34)
(M90)
(M82)
(B4)
(B3)
(B5)
(M50)
H-board complete
(B4)
B-board shield case
(M29)
(M78)
(M77)
(B6)
(M16)
(M76)
(M88)
(B7)
AC cord
(M35)
(M68)
(B4)
(B7)
(B13)
(B7)
(B14)
(M27)
AC inlet
(B4)
(M54)
B-board complete
(M83)
(B7)
(M81)
(M81)
(B4)
(M36)
B-board holder

EPLACEMENT PARTS LIST

Important Safety Notice

Components identified by shaded area have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

tes: **RTL (Retention Time Limited)**

The marking (RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention.

After the end of this period, the assembly will no longer be available.

Abbreviation of Part Name and Description

See page 77 for abbreviations of the Resistor/Capacitor type and allowance.

echanical Parts

ef. No.	Part No.	Description
I1	A68KZN696XTG	CRT
	I68KZN696XTG	CRT (ITC)
I2	PUKY4UW361X	DY
I3	S3003	CY
I4	PUWX9270101A	CRT Grounding Strap 1
I5	PUWX9270102	CRT Grounding Strap 2
I6	PULK291001N	Degaussing Coil
I7	VB-25SR	DY Wedge
I8	PUWX7270144	CRT Spring A
I9	PUWX7270143	CRT Spring B
110	KR06TT281807	Ferrite Core A
111	EAG1208L	Speaker (R)/(L)
112	PUKR9270126	Speaker Holder (R)
113	PUKR9270127	Speaker Holder (L)
114	ESB99707V	Power Switch
115	PUKR9270121	Power Switch Holder
116	KR16CC160928	Ferrite Core B
117	PUKR9270103	Main Board Holder
118	BSB-325	Spacer
119	PUKR9270109	Side Angle (R)
120	PUKR9270110	Side Angle (L)
121	PAES3503	Ground Spring
122	PUKR9270105	Main Frame
123	2299	Rubber Foot
124	PUKR9270102	N-Board Holder
125	PUKR9270119	N-Board Shield Case
126	KGES-10	Edge Spacer
127	PUWX5270101	AC Inlet
129	PUKR9270123	B-Board Shield Case
130	PUKR9270129	B-Board Heat Sink
131	PUKR9270104	D-Board Holder
132	FBA09A12MO	Fan Motor
133	PUQF9270103	Terminal Panel
134	PUWX7270113	Back Cabinet Complete
135	S4GK017	AC Cord
136	PUKR9270101	B-Board Holder
137	KR06TT161208	Ferrite Core
138	PUWX8270103	Front Cabinet Complete
139	PAKK378301	Panel Light 1
140	PAKK378302	Panel Light 2

Ref. No.	Part No.	Description
M41	PAKK378303	Panel Light 3
M42	PUKY9270105	Hinge Button
M43	PUKM9270101	CRT Rubber Spacer
M44	PUKR9270145	Transformer Holder Angle
M45	PUKM9270102	Rubber Cushion
M46	PUQF9270112	Rating Label
M47	PUN92701F-J	F-Board Complete (RTL)
M48	PUN92701E-J	E-Board Complete (RTL)
M49	PUN92701A-J	A-Board Complete (RTL)
M50	PUN92701H-J	H-Board Complete (RTL)
M51	PUN92701C-J	C-Board Complete
M52	PUN92701X-J	X-Board Complete (RTL)
M53	PUN92701N-J	N-Board Complete (RTL)
M54	PUN92701B-J	B-Board Complete (RTL)
M55	PUN92701D-J	D-Board Complete (RTL)
M59	PUWV9270110	3P Coupler/Speaker (R)-CO-10D
M60	PUWV9270109	3P Coupler/Speaker (L)-CO-09D
M64	PUWV92701562	3P Coupler/CO-56C-CO-56N
M65	PUWV92701572	3P Coupler/CO-57C-CO-57N
M66	PUWV92701582	3P Coupler/CO-58C-CO-58N
M67	PUWV9270159	1P Coupler/CO-59C-CO-59N
M68	PUWV9270150	5P Coupler/CO-50B-CO-50N
M69	PUWV9270151	8P Coupler/CO-51N-CO-51X
M70	PUWV9270152	12P Coupler/CO-52N-CO-52X
M71	PUWV9270141	6P Coupler/CO-41X-CO-41D
M72	PUWV9270142	7P Coupler/CO-42X-CO-42D
M73	PUWV92701491	6P Coupler/CO-49N-CO-49D
M74	PUWV92701531	10P Coupler/CO-53N-CO-53D
M75	PUWV9270143	7P Coupler/CO-43X-CO-43D
M76	PUWV9270148	4P Coupler/CO-48B-CO-48D
M77	PUWV9270111	6P Coupler/CO-11B-CO-11X
M78	PUWV9270117	3P Coupler/CO-17B-CO-17C
M80	HL-18-0	Clamper
M81	WS-2NS	Clamper
M82	TMM15412-1	Clamper
M83	TCBS-8-19	Spacer
(OR)	KGTS-8K (V-0)	Spacer
M84	LWS-2Y	Clamper
M85	EDS-1717U	Clamper
M86	TMM16452	Clamper

Ref. No.	Part No.	Description
M87	KGTS-6K	Spacer
M88	NK-14N	Clamper
M89	FGC-8	Clamper
M90	TMM6428-1	Clamper
M91	PUKY9270101	Front Panel Complete
M92	PUKY9270102	Front Jack Panel Complete
M93	PUFGSTM4CNK	FG Strap
M94	FF1001	Foot
B1	PAHT1004	CRT Screw
B2	XTV3+12G	3x12 mm Screw
B3	XTB4+8FFZ	4x8 mm Screw
B4	XSN3+W6	3x6 mm Screw
B5	XTB4+16GFZ	4x16 mm Screw
B6	XTV3+8F	3x8 mm Screw
B7	XTV3+8J	3x8 mm Screw
B8	XYN3+C8	3x8 mm Screw
B9	XTB4+12F	4x12 mm Screw
B10	XTW3+12J	3x12 mm Screw
B11	XTN4+30F	4x30 mm Screw
B12	XTV3+12GFZ	3x12 mm Screw
B13	XTS3+8F	3x8 mm Screw
B14	XYA4+EF8	4x8 mm Screw

A-Board

Ref. No.	Part No.	Description			
		RESISTORS			
R401	ERDS2TJ182	C	1.8k	J	1/4W
R402	ERDS2TJ562	C	5.6k	J	1/4W
R403	ERDS2TJ560	C	56	J	1/4W
R404	ERDS2TJ103	C	10k	J	1/4W
R405	ERDS2TJ183	C	18k	J	1/4W
R406	ERDS2TJ103	C	10k	J	1/4W
R407	ERDS2TJ333	C	33k	J	1/4W
R408	ERDS2TJ334	C	330k	J	1/4W
R409	ERDS2TJ392	C	3.9k	J	1/4W
R410	ERDS1TJ180	C	18	J	1/2W
R411	ERDS2TJ222	C	2.2k	J	1/4W
R412	EROS2CKF1652	M	16.5k	F	1/4W
R413	ERDS2TJ470	C	47	J	1/4W
R414	ERDS2TJ103	C	10k	J	1/4W
R415	ERDS2TJ103	C	10k	J	1/4W
R416	EROS2CKF3902	M	39.0k	F	1/4W
R417	EROS2CKF3902	M	39.0k	F	1/4W
R418	ERDS2TJ472	C	4.7k	J	1/4W
R419	ERDS2TJ183	C	18k	J	1/4W
R420	EROS2CKF4702	M	47.0k	F	1/4W
R421	EROS2CKF3002	M	30.0k	F	1/4W
R422	ERX2ANJR68H	M	0.68	J	2W
R423	ERDS2TJ563	C	56k	J	1/4W
R424	ERDS2TJ563	C	56k	J	1/4W
R425	ERDS1TJ471	C	470	J	1/2W
R426	ERDS2TJ122	C	1.2k	J	1/4W
R427	ERDS2TJ272	C	2.7k	J	1/4W
R429	ERDS2TJ1R0	C	1	J	1/4W
R430	ERDS2TJ332	C	3.3k	J	1/4W
R431	ERDS2TJ223	C	22k	J	1/4W
R432	ERG1ANJ332H	M	3.3k	J	1W
R433	ERDS2TJ103	C	10k	J	1/4W
R434	ERDS2TJ223	C	22k	J	1/4W
R435	ERDS2TJ393	C	39k	J	1/4W
R436	ERG2ANJ103H	M	10k	J	2W
R437	ERG1ANJ271H	M	270	J	1W
R438	ERDS2TJ102	C	1k	J	1/4W
R439	ERDS2TJ103	C	10k	J	1/4W
R440	ERDS2TJ152	C	1.5k	J	1/4W
R441	ERG1ANJ270H	M	27	J	1W
R442	ERG1ANJ270H	M	27	J	1W
R444	ERDS2TJ221	C	220	J	1/4W
R445	ERDS2TJ392	C	3.9k	J	1/4W
R446	EVND2AA03B53	V. LINEARITY (5kB)			
R447	ERDS2TJ103	C	10k	J	1/4W
R448	ERDS2TJ1R0	C	1	J	1/4W
R449	ERDS2TJ123	C	12k	J	1/4W
R450	ERDS2TJ123	C	12k	J	1/4W
R452	ERDS2TJ273	C	27k	J	1/4W
R453	ERDS2TJ273	C	27k	J	1/4W
R454	ERDS2TJ273	C	27k	J	1/4W
R455	ERDS2TJ273	C	27k	J	1/4W
R456	ERDS2TJ273	C	27k	J	1/4W
R457	ERDS2TJ273	C	27k	J	1/4W
R458	ERDS2TJ561	C	560	J	1/4W
R459	ERDS2TJ561	C	560	J	1/4W
R460	ERDS2TJ272	C	2.7k	J	1/4W
R461	ERDS2TJ153	C	15k	J	1/4W
R462	ERDS2TJ181	C	180	J	1/4W
R463	ERDS2TJ563	C	56k	J	1/4W
R464	ERDS2TJ182	C	1.8k	J	1/4W
R465	EVND2AA03B53	V. LINEARITY (5kB)			
R466	EVND2AA03B53	V. LINEARITY (5kB)			
R467	ERX2ANJ8R2H	M	8.2	J	2W
R468	ERQ12HJ1R2P	F	1.2	J	1/2W
R501	ERDS2TJ222	C	2.2k	J	1/4W
R502	ERDS2TJ123	C	12k	J	1/4W
R503	ERDS2TJ223	C	22k	J	1/4W
R504	ERDS2TJ684	C	680k	J	1/4W
R505	ERDS2TJ222	C	2.2k	J	1/4W
R506	ERDS2TJ182	C	1.8k	J	1/4W
R507	ERDS2TJ681	C	680	J	1/4W
R508	ERDS2TJ822	C	8.2k	J	1/4W
R509	ERDS2TJ221	C	220	J	1/4W
R510	ERDS2TJ182	C	1.8k	J	1/4W

Ref. No.	Part No.	Description			
R511	ERDS2TJ563	C	56k	J	1/4W
R512	EROS2CKF2001	M	2.00k	F	1/4W
R513	EROS2CKF2001	M	2.00k	F	1/4W
R514	EROS2CKF3741	M	3.74k	F	1/4W
R515	EROS2CKF1822	M	18.2k	F	1/4W
R516	ERDS2TJ684	C	680k	J	1/4W
R519	ERDS2TJ683	C	68k	J	1/4W
R520	ERDS2TJ333	C	33k	J	1/4W
R521	ERDS2TJ153	C	15k	J	1/4W
R522	ERDS2TJ123	C	12k	J	1/4W
R523	ERDS2TJ683	C	68k	J	1/4W
R524	ERDS2TJ103	C	10k	J	1/4W
R525	ERDS2TJ103	C	10k	J	1/4W
R526	ERDS2TJ103	C	10k	J	1/4W
R527	ERDS2TJ391	C	390	J	1/4W
R533	ERDS2TJ470	C	47	J	1/4W
R534	EROS2CKF1822	M	18.2k	F	1/4W
R535	EROS2CKF1542	M	15.4k	F	1/4W
R536	ERDS2TJ332	C	3.3k	J	1/4W
R537	ERDS2TJ102	C	1k	J	1/4W
R538	ERDS2TJ182	C	1.8k	J	1/4W
R539	ERDS2TJ681	C	680	J	1/4W
R540	ERDS2TJ103	C	10k	J	1/4W
R541	ERDS2TJ272	C	2.7k	J	1/4W
R542	ERDS2TJ123	C	12k	J	1/4W
R544	ERDS2TJ182	C	1.8k	J	1/4W
R545	ERDS2TJ123	C	12k	J	1/4W
R547	EROS2CKF9101	M	9.10k	F	1/4W
R548	ERDS2TJ184	C	180k	J	1/4W
R549	ERDS2TJ104	C	100k	J	1/4W
R550	ERDS2TJ562	C	5.6k	J	1/4W
R551	EROS2CKF3321	M	3.32k	F	1/4W
R552	EROS2CKF1301	M	1.30k	F	1/4W
R553	ERDS2TJ473	C	47k	J	1/4W
R554	ERDS2TJ123	C	12k	J	1/4W
R555	ERDS2TJ564	C	560k	J	1/4W
R556	ERDS2TJ392	C	3.9k	J	1/4W
R557	ERDS2TJ123	C	12k	J	1/4W
R558	ERDS2TJ103	C	10k	J	1/4W
R560	ERDS2TJ123	C	12k	J	1/4W
R561	ERDS2TJ392	C	3.9k	J	1/4W
R562	ERDS2TJ822	C	8.2k	J	1/4W
R563	ERDS2TJ392	C	3.9k	J	1/4W
R564	ERDS2TJ394	C	390k	J	1/4W
R565	ERDS2TJ222	C	2.2k	J	1/4W
R566	ERDS2TJ823	C	82k	J	1/4W
R567	ERDS2TJ562	C	5.6k	J	1/4W
R568	EROS2CKF3902	M	39.0k	F	1/4W
R569	ERDS2TJ472	C	4.7k	J	1/4W
R570	ERDS2TJ103	C	10k	J	1/4W
R571	ERDS2TJ123	C	12k	J	1/4W
R572	ERDS2TJ101	C	100	J	1/4W

Ref. No.	Part No.	Description			
R573	ERDS2TJ103	C	10k	J	1/4W
R574	ERDS2TJ393	C	39k	J	1/4W
R575	ERDS2TJ822	C	8.2k	J	1/4W
R576	ERDS2TJ682	C	6.8k	J	1/4W
R577	ERDS2TJ394	C	390k	J	1/4W
R578	ERDS2TJ273	C	27k	J	1/4W
R579	ERG2ANJ560H	M	56	J	2W
R580	ERQ12HKR22P	F	0.22	K	1/2W
R581	ERG5ZYJ122	M	1.2k	J	5W
R582	ERG1ANJ103H	M	10k	J	1W
R583	ERG1ANJ222H	M	2.2k	J	1W
R584	EROS2CKF5602	M	56.0k	F	1/4W
R585	EROS2CKF3301	M	3.30k	F	1/4W
R586	EROS2CKF1502	M	15.0k	F	1/4W
R587	ERDS2TJ270	C	27	J	1/4W
R588	ERG2ANJ332H	M	3.3k	J	2W
R590	ERF7ZK2R2	W	2.2	J	7W
R591	ERG1ANJ270H	M	27	J	1W
R592	ERX1ANJ1R5H	M	1.5	J	1W
R593	ERDS2TJ102	C	1k	J	1/4W
R594	ERDS2TJ103	C	10k	J	1/4W
R595	ERDS2TJ102	C	1k	J	1/4W
R596	ERDS2TJ103	C	10k	J	1/4W
R597	ERQ1ABJP5R6S	F	5.6	J	1W
R598	ERDS2TJ470	C	47	J	1/4W
R5100	ERDS2TJ562	C	5.6k	J	1/4W
R5101	ERDS2TJ682	C	6.8k	J	1/4W
R5102	ERDS2TJ391	C	390	J	1/4W
R5103	ERDS2TJ103	C	10k	J	1/4W
R5104	ERDS2TJ102	C	1k	J	1/4W
R5112	ERDS1TJ1R0	C	1	J	1/2W
R5113	ERDS2TJ332	C	3.3k	J	1/4W
R5114	ERDS2TJ682	C	6.8k	J	1/4W
R5115	ERDS2TJ222	C	2.2k	J	1/4W
R5116	ERDS2TJ562	C	5.6k	J	1/4W
R5117	ERDS2TJ102	C	1k	J	1/4W
R5118	ERDS2TJ2R2	C	2.2	J	1/4W
R5119	ERDS2TJ2R2	C	2.2	J	1/4W
R5120	ERX2ANJ8R2H	M	8.2	J	2W
R5121	ERG2ANJ120H	M	12	J	2W
R5122	ERDS2TJ103	C	10k	J	1/4W
R5123	ERDS2TJ103	C	10k	J	1/4W
R5124	ERDS2TJ103	C	10k	J	1/4W
R5125	ERDS2TJ103	C	10k	J	1/4W
R5126	ERDS2TJ103	C	10k	J	1/4W
R5127	ERDS1TJ223	C	22k	J	1/2W
R5129	ERDS1TJ223	C	22k	J	1/2W
R5130	ERDS1TJ223	C	22k	J	1/2W
R5131	ERDS1TJ223	C	22k	J	1/2W
R5132	ERDS1TJ223	C	22k	J	1/2W
R5133	ERDS2TJ472	C	4.7k	J	1/4W
R5134	ERG2ANJ681H	M	680	J	2W

Ref. No.	Part No.	Description			
R5135	ERDS2TJ224	C	220k	J	1/4W
R5136	ERDS2TJ472	C	4.7k	J	1/4W
R5137	EROS2CKF7682	M	76.8k	F	1/4W
R5138	EROS2CKF3000	M	300	F	1/4W
R5142	ERDS2TJ101	C	100	J	1/4W
R5143	ERDS2TJ101	C	100	J	1/4W
R5144	ERDS2TJ101	C	100	J	1/4W
R5145	EROS2CKF7682	M	76.8k	F	1/4W
R5146	EROS2CKF3000	M	300	F	1/4W
R5147	ERG2ANJ150H	M	15	J	2W
R5148	ERDS2TJ561	C	560	J	1/4W
R5149	EROS2CKF1001	M	1.00k	F	1/4W
R5150	EROS2CKF1001	M	1.00k	F	1/4W
R5151	EROS2CKF7682	M	76.8k	F	1/4W
R5152	EROS2CKF3000	M	300	F	1/4W
R5164	ERDS2TJ103	C	10k	J	1/4W
R5165	ERDS2TJ472	C	4.7k	J	1/4W
R5166	ERDS2TJ472	C	4.7k	J	1/4W
R5167	ERDS2TJ221	C	220	J	1/4W
R5168	ERDS2TJ822	C	8.2k	J	1/4W
R5169	ERDS2TJ103	C	10k	J	1/4W
R5170	ERDS2TJ222	C	2.2k	J	1/4W
R5171	ERDS2TJ123	C	12k	J	1/4W
R5172	ERDS2TJ222	C	2.2k	J	1/4W
R5175	ERDS2TJ330	C	33	J	1/4W
R5176	ERDS2TJ332	C	3.3k	J	1/4W
R5179	ERG1ANJ270H	M	27	J	1W
R5180	ERX1ANJ1R5H	M	1.5	J	1W
R5181	ERG2ANJ150H	M	15	J	2W
R5182	ERG2ANJ681H	M	680	J	2W
R5183	ERQ2CKPR33S	F	0.33	K	2W
R5185	ERDS2TJ103	C	10k	J	1/4W
R5186	ERG2SJ104H	M	100k	J	2W
R5188	ERDS2TJ103	C	10k	J	1/4W
R5189	ERG2ANJ120H	M	12	J	2W
R5190	ERDS2TJ101	C	100	J	1/4W
R5191	CT-6R202	H. SIZE ADJ. (2kB)			
CAPACITORS					
C401	ECKW1H103MD	C	0.01	M	50V
C402	KCEA1CU470E	E	47		16V
C403	KCEA1CU101E	E	100		16V
C404	ECQB1H104KFW	P	0.1	K	50V
C405	ECQB1H682JFW	P	6800p	J	50V
C406	KCEA1VU102E	E	1000		35V
C409	KCEA2AU100E	E	10		100V
C410	ECQB1H224KFW	P	0.22	K	50V
C411	ECQB1472KFW	P	4700p	K	100V
C412	KCEA1VGE471E	E	470		35V
C413	ECQV1H684JMW	TF	0.68	J	50V
C415	ECQV1H474JMW	TF	0.47	J	50V
C416	ECQB1H333JFW	P	0.033	J	50V

Ref. No.	Part No.	Description			
C417	ECQV1H105JZW	TF	1	J	50V
C418	KCEA1CU471E	E	470		16V
C419	KCEA1EU470E	E	47		25V
C420	KCEA1EU100E	E	10		25V
C421	KCEA1CU330E	E	33		16V
C422	ECQB1H104KFW	P	0.1	K	50V
C423	ECQB1H103KFW	P	0.01	K	50V
C425	ECQB1H104KFW	P	0.1	K	50V
C426	KCEA1CU330E	E	33		16V
C427	KCEA1CU330E	E	33		16V
C429	KCEA1HU4R7E	E	4.7		50V
C430	KCEA1HU330E	E	33		50V
C432	KCEA1CU220E	E	22		16V
C433	ECQB1H104KFW	P	0.1	K	50V
C434	ECQB1H224KFW	P	0.22	K	50V
C435	KCEA1VGE471E	E	470		35V
C436	KCEA1CU220E	E	22		16V
C437	ECQV1H334JMW	TF	0.33	J	50V
C501	ECCW1H820JC4	C	82p	J	50V
C502	ECCW1H220JC	C	22p	J	50V
C503	ECCW1H151JC4	C	150p	J	50V
C504	ECQB1H152JFW	P	1500p	J	50V
C505	ECQB1H471JFW	P	470p	J	50V
C506	ECQB1H222JFW	P	2200p	J	50V
C507	KCEA1CU100E	E	10		16V
C508	ECQB1H104JFW	P	0.1	J	50V
C509	KCEA1HU2R2E	E	2.2		50V
C510	ECQK1472GZW	P	4700p	G	100V
C511	ECFW1C104MR2	C	0.1	M	16V
C512	KCEA1HU010E	E	1		50V
C513	ECFW1C104MR2	C	0.1	M	16V
C515	KCEA1CU100E	E	10		16V
C521	ECKW1H103MD	C	0.01	M	50V
C522	KCEA1CU102E	E	1000		16V
C523	KCEA0JU101E	E	100		6.3V
C524	ECCW1H270JC	C	27p	J	50V
C525	ECQV1H125JLW	TF	1.2	J	50V
C526	ECKW1H562KB	C	5600p	K	50V
C527	KCEA1CU100E	E	10		16V
C528	KCEA1CU331E	E	330		16V
C529	KCEA1CU470E	E	47		16V
C530	KCEA1CU470E	E	47		16V
C532	KCEA1CU100E	E	10		16V
C533	ECQM4333KZB	P	0.033	K	400V
C534	ECKW2H681KB5	C	680p	K	500V
C535	KCEA0JU101E	E	100		6.3V
C536	KCEA1HU010E	E	1		50V
C537	ECFW1C104MR2	C	0.1	M	16V
C538	KCEA1CU100E	E	10		16V
C539	ECKW1H103MD	C	0.01	M	50V
C540	KCEA1CU220E	E	22		16V
C541	ECKW1H103MD	C	0.01	M	50V

Ref. No.	Part No.	Description			
C542	KCEA1EU101E	E	100		25V
C543	KCEA1EU101E	E	100		25V
C544	KCEA1EU100E	E	10		25V
C545	KCEA2CU220E	E	22		160V
C546	KCEA1CU101E	E	100		16V
C547	KCEA1CU331E	E	330		16V
C548	ECQB1H104JFW	P	0.1	J	50V
C549	ECKW1H103MD	C	0.01	M	50V
C550	KCEA1HU2R2E	E	2.2		50V
C554	ECFW1C104MR2	C	0.1	M	16V
C558	ECFW1C104MR2	C	0.1	M	16V
C559	ECCW1H121JC4	C	120p	J	50V
C560	KCEA1CU101E	E	100		16V
C561	KCEA2CU100E	E	10		160V
C562	KCEA1CU220E	E	22		16V
C563	KCA1EFQ152L	E	1500		25V
C564	KCA1EFQ561	E	560		25V
C565	KCEA1JU100E	E	10		63V
C566	KCEA1VU330E	E	33		35V
C567	KCEA1VU330E	E	33		35V
C568	KCEA2AU101E	E	100		100V
C569	KCEA2AU101E	E	100		100V
C570	PUCF9270102	MP	1.2	J	400V
C571	PUCF9270106	MP	0.47	J	400V
C572	PUCF9270104	MP	0.18	J	400V
C573	PUCF9270103	MP	0.12	J	400V
C574	PUCF9270105	MP	0.047	J	400V
C575	PUCF9270107	MP	0.12	J	1.25kV
C577	KCEA1EU100E	E	10		25V
C578	KCEA1EU100E	E	10		25V
C579	KCEA1EU100E	E	10		25V
C580	KCEA1EU100E	E	10		25V
C581	KCEA1EU100E	E	10		25V
C582	KCEA1CU100E	E	10		16V
C583	KCEA1CU100E	E	10		16V
C584	ECKR3A471KBP	C	470p	K	1kV
C585	PUCF9270108	MP	1000p	H	1.8kV
C586	PUCF9270109	MP	6800p	H	1.8kV
C587	ECKW1H103MD	C	0.01	M	50V
C589	PUCF9270101	MP	4.7	J	250V
C590	PUCF9270101	MP	4.7	J	250V
C591	KCEA2VU220E	E	22		350V
C592	KCEA1CU470E	E	47		16V
C593	KCEA1CU220E	E	22		16V
C597	ECQV1H224JLW	TF	0.22	J	50V
C598	KCEA2GGE4R7E	E	4.7		400V
DIODES					
D401	RD5.6ESAB3	Zener Diode (Vz=5.6V)			
D402	MA165	Diode			
D403	MA165	Diode			
D404	MA165	Diode			

Ref. No.	Part No.	Description
D405	MA165	Diode
D406	EM1Z	Diode
D407	EM1Z	Diode
D408	RD9.1ESAB2	Zener Diode (Vz=9.1V)
D409	RD9.1ESAB2	Zener Diode (Vz=9.1V)
D411	MA167	Diode
D412	MA167	Diode
D413	MA167	Diode
D414	RD8.2ESAB2	Zener Diode (Vz=8.2V)
D416	MA165	Diode
D417	EM1Z	Diode
D418	RD5.6ESAB3	Zener Diode (Vz=5.6V)
D502	MA165	Diode
D503	MA165	Diode
D504	RD5.6ESAB2	Zener Diode (Vz=5.6V)
D505	RD5.6ESAB2	Zener Diode (Vz=5.6V)
D506	RD5.6ESAB2	Zener Diode (Vz=5.6V)
D507	MA165	Diode
D508	MA27T-A	Diode
D511	MA165	Diode
D512	MA165	Diode
D514	MA165	Diode
D515	RD8.2ESAB2	Zener Diode (Vz=8.2V)
D516	MA165	Diode
D517	MA165	Diode
D518	MA165	Diode
D519	MA165	Diode
D520	RG4ALF-L1	Diode
D521	MA165	Diode
D522	MA165	Diode
D523	MA165	Diode
D524	MA165	Diode
D528	D3S4M-04P15	Diode
D529	D3S4M-04P15	Diode
D530	RD12ESAB1	Zener Diode (Vz=12V)
D531	MA170	Diode
D532	MA165	Diode
D533	MA165	Diode
D534	TVSRGP10J	Diode
D535	RD15ESAB2	Zener Diode (Vz=15V)
D536	RD18ESAB2	Zener Diode (Vz=18V)
D537	EK16	Diode
D538	RD15ESAB2	Zener Diode (Vz=15V)
D539	RD18ESAB2	Zener Diode (Vz=18V)
D540	FMP-G5HS	Diode (H. Dump)
D541	MA165	Diode
D543	RD2.2ESAB2	Zener Diode (Vz=2.2V)
D544	MA165	Diode
D545	MA165	Diode
D546	D1NL20U	Diode
D547	D1NL20U	Diode
D548	MA165	Diode

Ref. No.	Part No.	Description
D549	RD8.2ESAB2	Zener Diode (Vz=8.2V)
D550	MA165	Diode
INTEGRATED CIRCUITS		
IC401	LA7837	IC
IC402	LA7846	IC (V. Output)
IC403	NJM78L12A	+12V Regulator
IC404	NJM3404AD	IC (OP. Amp.)
IC501	M62352P	IC (D/A Converter)
IC502	LA7852	IC (Jungle)
IC503	NJM3404AD	IC (OP. Amp.)
IC504	NJM2901N	IC (Comparator)
IC505	NJM78M12FA	+12V Regulator
IC506	NJM7805FA	+5V Regulator
IC507	NJM7905FA	−5V Regulator
IC508	HA17431P	Shunt Regulator
IC509	NJM3404AD	IC (OP. Amp.)
COILS		
L401	TLT391K991R	Peaking Coil (390μH)
L501	TLT221K991R	Peaking Coil (220μH)
L502	TLT221K991R	Peaking Coil (220μH)
L503	PUTL9270101	Choke Coil
L505	LHL08NB221K	Inductor (220μH)
L506	LHL13NB332J	Inductor (3.3mH)
L507	LHL13NB332J	Inductor (3.3mH)
L508	ELHKLB010B	Linearity Coil
L509	ELHKLB010B	Linearity Coil
TRANSISTORS		
Q401	2SA933S	Transistor
Q402	2SC1740S	Transistor
Q403	2SC3402	Transistor
Q404	2SC3402	Transistor
Q405	2SC1740S	Transistor
Q406	2SC1740S	Transistor
Q407	2SC1740S	Transistor
Q408	2SK614	FET
Q409	2SK614	FET
Q410	2SB940A-P	Transistor
Q411	2SD1264-P	Tr (V. Pump-up Series Reg.)
Q412	MPSA43C	Transistor
Q413	2SB1548A	Transistor
Q414	2SD2374A	Transistor
Q415	2SA933S	Transistor
Q418	2SA933S	Transistor
Q419	2SC3402	Transistor
Q501	2SC3402	Transistor
Q503	2SC1740S	Transistor
Q504	2SA933S	Transistor
Q505	2SK1351	FET (H. Drive)
Q506	2SC3402	Transistor
Q507	2SK1033	FET
Q508	2SK1033	FET

Ref. No.	Part No.	Description
Q509	2SC3402	Transistor
Q510	2SD1264-P	Tr (H. Drive Voltage Series Reg.)
Q511	MPSA43C	Tr (H. Drive Voltage Control)
Q512	2SC3402	Transistor
Q513	2SK1642	FET (H. +B Chopper)
Q514	2SC5144	Tr (H. Output)
Q515	2SA933S	Transistor
Q516	2SC1740S	Transistor
Q517	2SA933S	Transistor
Q519	2SC1740S	Transistor
Q520	2SD2375	Transistor
Q521	2SB1299-P	Transistor
Q522	2SC3946	Transistor
Q523	2SC3399	Transistor
Q524	2SC3399	Transistor
Q525	2SC3399	Transistor
Q526	2SC3399	Transistor
Q527	2SC3399	Transistor
Q528	2SK1642	FET (Switching)
Q529	2SK1642	FET (Switching)
Q530	2SK1642	FET (Switching)
Q531	2SK1642	FET (Switching)
Q532	2SK1642	FET (Switching)
Q533	2SK1642	FET (Switching)
Q534	2SK1642	FET (Switching)
Q535	2SK1642	FET (Switching)
Q536	2SK1642	FET (Switching)
Q538	2SK1642	FET (Switching)
Q541	2SC1740S	Transistor
Q542	2SC1740S	Transistor
Q543	2SA933S	Transistor
Q544	2SA933S	Transistor
Q545	2SA933S	Transistor
Q546	2SC1740S	Transistor
Q547	2SC2634-T	Tr (H. Size Error Amp.)
Q548	2SA933S	Transistor
Q549	2SA933S	Transistor
Q550	2SA933S	Transistor
Q551	2SC1740S	Transistor
Q553	2SC1740S	Transistor
Q555	2SC3402	Transistor
Q557	2SC1740S	Transistor
Q558	2SA1348	Transistor
Q559	2SC1740S	Transistor
Q561	2SD1446	Tr (H. +B Series Reg.)
TRANSFORMERS		
T501	PUKF4663K	Deflection Transformer
T502	ETE13K73AY	Drive Transformer
T503	ETH24K45AY	Drive Transformer
OTHERS		
CO-01A	53291-1191	11P Connector

ef. No.	Part No.	Description
O-02A	53291-1291	12P Connector
O-03A	53291-1291	12P Connector
O-05A	PUWV92701051	11P Coupler
O-06A	PUWV9270106	6P Coupler
O-08A	B7B-EH	7P Connector
O-44A	PUWV9270144	3P Coupler
Y(V)	TN-50P-03-V1	3P DY(V) Connector
L501	VS-18MB-UL3	Relay
	PAUC30606	Heat Sink/Q510
	PUKR9270131	Heat Sink/D540, Q514
	PUKR9270134	Heat Sink/IC402
	PUKR9270135	
	PUKR9270138	Heat Sink/IC505, IC507
	PUKR9270139	Heat Sink/IC506, Q411, Q513, Q561
	TCBS-8-19	Spacer
OR)	KGTS-8K (V-0)	Spacer
	TMM15412-1	Clamper
	XTV3+8J	Screw/Q510
	XYN3+J10FX	Screw/D540, IC402, IC505-IC507
	XYN3+J10FX	Screw/Q411, Q513, Q514, Q561

-Board

Ref. No.	Part No.	Description			
		RESISTORS			
R801	ERQ12AJ470P	F	47	J	1/2W
R802	ERDS2TJ102	C	1k	J	1/4W
R803	ERQ1ABJP561S	F	560	J	1W
R804	PUVR9270101	PTC Thermistor			
R805	PUVR9270101	PTC Thermistor			
R806	ERC12AGK334	S	330k	K	1/2W
R807	NTH9D160LA-1	NTC Thermistor			
R808	ERG1ANJ473H	M	47k	J	1W
R809	ERG1ANJ393H	M	39k	J	1W
R810	ERG1ANJ393H	M	39k	J	1W
R811	RGC2TK0.56	P	0.56	K	2W
R812	ERG2ANJ563H	M	56k	J	2W
R814	ERG1ANJ390H	M	39	J	1W
R815	EROS2CKF1502	M	15.0k	F	1/4W
R816	EROS2CKF1802	M	18.0k	F	1/4W
R817	ERDS2TJ180	C	18	J	1/4W
R818	ERDS2TJ270	C	27	J	1/4W
R819	ERDS2TJ333	C	33k	J	1/4W
R820	ERDS2TJ563	C	56k	J	1/4W
R821	ERDS2TJ153	C	15k	J	1/4W
R823	EVND8AA03B33	STANDBY PS HEATER ADJ. (3kB)			
R824	ERDS2TJ562	C	5.6k	J	1/4W
R825	ERDS2TJ332	C	3.3k	J	1/4W
R826	ERDS2TJ102	C	1k	J	1/4W
R827	ERG1ANJ621H	M	620	J	1W
R828	ERG1ANJ621H	M	620	J	1W

Ref. No.	Part No.	Description			
R829	A53K-100J	F	10	J	5W
R830	RGC2TK0.12	P	0.12	K	2W
R831	ERO25CKF3303	M	330k	F	1/4W
R832	ERO25CKF3303	M	330k	F	1/4W
R833	ERO25CKF3603	M	360k	F	1/4W
R834	ERO25CKF3603	M	360k	F	1/4W
R835	ERG2ANJ563H	M	56k	J	2W
R836	ERG2ANJ563H	M	56k	J	2W
R837	ERG2ANJ563H	M	56k	J	2W
R838	ERG2ANJ330H	M	33	J	2W
R839	ERG2ANJ223H	M	22k	J	2W
R840	ERG2ANJ223H	M	22k	J	2W
R841	ERG2ANJ223H	M	22k	J	2W
R842	RGC2TK0.15	P	0.15	K	2W
R844	ERQ14AJ2R0P	F	2	J	1/4W
R845	ERDS1TJ224	C	220k	J	1/2W
R846	ERDS1TJ224	C	220k	J	1/2W
R847	ERDS2TJ470	C	47	J	1/4W
R848	ERG1SJ223P	M	22k	J	1W
R849	ERG1SJ223P	M	22k	J	1W
R850	ERX1ANJ4R7H	M	4.7	J	1W
R851	ERG1SJ223P	M	22k	J	1W
R852	ERDS2TJ152	C	1.5k	J	1/4W
R853	EROS2CKF2201	M	2.20k	F	1/4W
R854	EROS2CKF3900	M	390	F	1/4W
R855	EROS2CKF2002	M	20.0k	F	1/4W
R856	ERDS2TJ104	C	100k	J	1/4W
R857	ERG1ANJ220H	M	22	J	1W
R858	ERDS2TJ104	C	100k	J	1/4W
R859	ERDS2TJ474	C	470k	J	1/4W
R860	ERDS2TJ153	C	15k	J	1/4W
R861	EROS2CKF2701	M	2.70k	F	1/4W
R862	ERDS2TJ223	C	22k	J	1/4W
R864	ERG1ANJ100H	M	10	J	1W
R865	ERDS2TJ222	C	2.2k	J	1/4W
R866	ERDS2TJ510	C	51	J	1/4W
R867	ERDS2TJ220	C	22	J	1/4W
R868	EROS2CKF2202	M	22.0k	F	1/4W
R869	EROS2CKF2002	M	20.0k	F	1/4W
R870	ERDS2TJ473	C	47k	J	1/4W
R871	ERDS2TJ123	C	12k	J	1/4W
R873	ERDS2TJ222	C	2.2k	J	1/4W
R875	EROS2CKF3302	M	33.0k	F	1/4W
R876	EROS2CKF8201	M	8.20k	F	1/4W
R877	EROS2CKF5602	M	56.0k	F	1/4W
R878	ERDS2TJ102	C	1k	J	1/4W
R879	ERQ14AJ181P	F	180	J	1/4W
R883	ERDS2TJ182	C	1.8k	J	1/4W
R885	ERQ12HKR22P	F	0.22	K	1/2W
R892	ERQ2CKPR33S	F	0.33	K	2W
R893	ERDS2TJ332	C	3.3k	J	1/4W
R895	ERDS2TJ472	C	4.7k	J	1/4W

Ref. No.	Part No.	Description			
R896	ERDS2TJ101	C	100	J	1/4W
R8100	ERDS2TJ122	C	1.2k	J	1/4W
R8101	ERDS2TJ184	C	180k	J	1/4W
R8102	ERDS2TJ184	C	180k	J	1/4W
R8103	EVND8AA03B52	MAIN PS +175V ADJ. (500B)			
R8104	ERDS2TJ332	C	3.3k	J	1/4W
CAPACITORS					
C801	**PA103-L[illegible]**	[illegible]	**0.01**	**M**	**AC250V**
C802	ECFW1H104ZF	C	0.1	Z	50V
C803	**PA224-L[illegible]**	[illegible]	**0.22**	**M**	**AC250V**
C804	**PA224-L[illegible]**	[illegible]	**0.22**	**M**	**AC250V**
C805	**PA224-L[illegible]**	[illegible]	**0.22**	**M**	**AC250V**
C806	**YE222 [illegible]**		**2200p**	**M**	**AC250V**
C807	**YE222**		**2200p**	**M**	**AC250V**
C808	**YE472 [illegible]**		**4700p**	**M**	**AC250V**
C810	PUCE9270102	E	68		400V
C811	ECQE6223KFB	MP	0.022	K	630V
C812	KCA1VFQ270E	E	27		35V
C814	ECQB1H681JFW	P	680p	J	50V
C815	KCEA1VGE4R7E	E	4.7		35V
C816	ECQB1H682JFW	P	6800p	J	50V
C817	ECQB1H103JFW	P	0.01	J	50V
C818	ECFW1H104ZF5	C	0.1	Z	50V
C819	ECQB1H154JFW	P	0.15	J	50V
C820	ECQB1H472JFW	P	4700p	J	50V
C824	ECFW1H104ZF5	C	0.1	Z	50V
C825	ECQE4474KF	MP	0.47	K	400V
C826	PUCE9270103	E	390		450V
C828	ECKD3A221KBP	C	220p	K	1kV
C829	ECKD3A221KBP	C	220p	K	1kV
C830	ECQE6223KFB	MP	0.022	K	630V
C831	KCA1VFQ101E	E	100		35V
C832	KCA1VFQ101E	E	100		35V
C833	ECQB1H332JFW	P	3300p	J	50V
C834	ECQB1H681JFW	P	680p	J	50V
C835	ECQB1H104JFW	P	0.1	J	50V
C836	ECCW1H680J	C	68p	J	50V
C837	ECQB1H471JFW	P	470p	J	50V
C838	ECQB1H222JFW	P	2200p	J	50V
C839	ECCW1H330J	C	33p	J	50V
C840	KCA1VFQ101E	E	100		35V
C841	ECQB1H223JFW	P	0.022	J	50V
C842	KCEA1VGE4R7E	E	4.7		35V
C843	ECQB1H681JFW	P	680p	J	50V
C845	ECFW1H104ZF5	C	0.1	Z	50V
C848	KCA1AFQ122	E	1200		10V
C849	KCEA1AGE101E	E	100		10V
C850	KCA1EFQ121E	E	120		25V
C851	KCEA1VGE100E	E	10		35V
C852	KCA1AFQ271E	E	270		10V
C853	KCEA1AGE101E	E	100		10V

Ref. No.	Part No.	Description			
C856	PUCE9270101	E	100		315V
C857	KCA2GHG100E	E	10		400V
C860	KMF250VB-10M	E	10		250V
C861	KCA2EHG4R7E	E	4.7		250V
C864	KMF160VB-22M	E	22		160V
C865	KCA2CHG4R7E	E	4.7		160V
C868	KCA1HFQ221	E	220		50V
C869	KCEA1HGE220E	E	22		50V
C872	KMF250VB-47M	E	47		250V
C873	KCA2EHG2R2E	E	2.2		250V
C876	KCA1VFQ102L	E	1000		35V
C877	KCEA1VGE330E	E	33		35V
C880	KCA1EFQ102	E	1000		25V
C881	KCEA1EGE470E	E	47		25V
C882	KCA1EFQ560E	E	56		25V
C890	KCA1EFQ561	E	560		25V
C893	ECFW1H104ZF5	C	0.1	Z	50V
C896	ECQB1H104JFW	P	0.1	J	50V
C897	ECQB1H103JFW	P	0.01	J	50V
C898	ECFW1H104ZF5	C	0.1	Z	50V
DIODES					
D801	**U6SB60**	**Diode**			
D802	EM2A	Diode			
D803	05NU42	Diode			
D804	D1NL20U	Diode			
D806	RD20ESAB1	Zener Diode (Vz=20V)			
D807	1SS178	Diode			
D808	D8L60	Diode			
D809	D1NS4	Diode			
D810	1NU41-LC6	Diode			
D811	D1NL20U	Diode			
D812	D1NL20U	Diode			
D813	D1NL20U	Diode			
D814	D1NL20U	Diode			
D815	D1NL20U	Diode			
D816	RD2.4ESAB2	Zener Diode (Vz=2.4V)			
D817	MA165	Diode			
D819	D1NL20U	Diode			
D820	RD30ESAB1	Zener Diode (Vz=30V)			
D821	MA165	Diode			
D822	RD30ESAB1	Zener Diode (Vz=30V)			
D823	RL2ZLFB1	Diode			
D824	D1NL20U	Diode			
D825	D1NL20U	Diode			
D826	FMG-G3CS	Diode			
D827	ERB44-08	Diode			
D828	S2L60-04P15	Diode			
D829	5DL2CZ47A	Diode			
D830	S2L60-04P15	Diode			
D831	5DL2CZ47A	Diode			
D832	5DL2CZ47A	Diode			

Ref. No.	Part No.	Description
D833	MA165	Diode
D835	RL2ZLFB1	Diode
D836	RD24ESAB4	Zener Diode (Vz=24V)
D837	MA165	Diode
D842	MA2270	Zener Diode (Vz=27V)
D843	DSAZR2-362M	Surge Absorber
INTEGRATED CIRCUITS		
IC801	M51995P	IC (Standby PS PWM)
IC802	PQ30RV11	IC
IC803	FA5331P	IC (Active Filter PWM)
IC804	M51995P	IC (Main PS PWM)
IC805	NJM78M12FA	+12V Regulator
IC806	NJM78M05FA	+5V Regulator
IC807	NJM7812FA	+12V Regulator
IC808	HA17431P	Shunt Regulator
COILS		
L801	PUTL9270102	Choke Coil
L802	PUTL9270103	Choke Coil
L803	PUTL9270103	Choke Coil
L804	EXCELSR35S	EMI Bead Core
L805	EXCELSR35S	EMI Bead Core
L806	ETS42AD2B9NC	Choke Coil
L807	EXCELSR35S	EMI Bead Core
L808	EXCELSR35S	EMI Bead Core
L809	EXCELSR35S	EMI Bead Core
L810	EXCELSR35S	EMI Bead Core
L811	EXCELSR35S	EMI Bead Core
L812	EXCELSR35S	EMI Bead Core
L813	PUTL9270104	Choke Coil
L814	PUTL9270105	Choke Coil
L815	PUTL9270105	Choke Coil
L816	PUTL9270104	Choke Coil
L817	PUTL9270105	Choke Coil
L818	PUTL9270104	Choke Coil
L819	PUTL9270104	Choke Coil
TRANSISTORS		
Q801	2SK1535	FET (Standby PS Output)
Q802	2SK1525	FET (Active Filter Output)
Q803	2SK1363	FET (Main PS Output)
Q804	2SC3402	Transistor
Q805	2SC3402	Transistor
Q807	2SA1348	Transistor
Q808	2SC3402	Transistor
Q810	2SC3402	Transistor
TRANSFORMERS		
T801	PUTL9270106	Power Transformer
(OR)	ETS29AB1M5NC	Power Transformer
T802	PUTL9270107	Power Transformer
OTHERS		
CO-05B	053A-9111	11P Angle Connector (Black)
CO-11B	053A-9006	6P Angle Connector
CO-12B	B3P5S-VH	5P Angle Connector
CO-13B	B2P3S-VH	3P Angle Connector
CO-14B	B2P3S-VH	3P Angle Connector
CO-15B	S4B-EH	4P Angle Connector
CO-17B	053A-9103	3P Angle Connector (Black)
CO-28B	051A-9103	3P Connector (Black)
CO-29B	051A-9104	4P Connector (Black)
CO-48B	053A-9104	4P Angle Connector (Black)
CO-50B	053A-9105	5P Angle Connector (Black)
CO-91B	053A-9109	9P Angle Connector (Black)
F801	215005	Fuse
(F801)	H-0032-1	Fuse Holder
LC801	EXCEMT103DC	EMI Filter
PC801	S21ME4FY	Photo TRIAC Coupler
PC802	TLP634GR-LF2	Photocoupler
PC803	TLP634GR-LF2	Photocoupler
TH801	SM12JZ47A	TRIAC
TH802	SF10JZ47	Thyristor
	PAUX37802	Ground Lug
	PUKR2015304	Bracket
	PUKR9270124	Heat Sink
	PUKR9270128	Heat Sink
	PUKR9270138	Heat Sink
	TC45ACPTO220	Silicone Sheet/D808, TH802
	TC45CG (TO3P)	Silicone Sheet/Q802, Q803
	TCBS-8-19	Spacer
	XTV3+8J	Screw/D808, TH802
	XYN3+J10FX	Screw/D829, D831, D832 IC802, IC807, Q802, Q803

C-Board

Ref. No.	Part No.	Description			
RESISTORS					
R7401	PUVR9270102	Focus (20MB)			
R7402	ERC14GK103	S	10k	K	1/4W
R7403	ERDS2TJ684	C	680k	J	1/4W
R7411	ERDS1TJ331	C	330	J	1/2W
R7412	ERC14GK330	S	33	K	1/4W
R7421	ERDS1TJ331	C	330	J	1/2W
R7422	ERC14GK330	S	33	K	1/4W
R7431	ERDS1TJ331	C	330	J	1/2W
R7432	ERC14GK330	S	33	K	1/4W
CAPACITORS					
C7401	ECKD3D182KBP	C	1800p	K	2kV
C7402	ECKD3D101KBP	C	100p	K	2kV
C7403	ECKD3D332KBP	C	3300p	K	2kV
C7404	ECKD3D821KBP	C	820p	K	2kV
COILS					
L7401	PUVR9270103	Bead Core			

Ref. No.	Part No.	Description
L7402	PUVR9270103	Bead Core
L7403	PUVR9270103	Bead Core
L7411	LAL02NAR47K	Choke Coil
L7421	LAL02NAR47K	Choke Coil
L7431	LAL02NAR47K	Choke Coil
	OTHERS	
CO-17C	053A-9103	3P Angle Connector (Black)
CO-56C	S3B-EH	3P Angle Connector
CO-57C	S3B-EH	3P Angle Connector
CO-58C	S3B-EH	3P Angle Connector
CO-66C	053A-9104	4P Angle Connector (Black)
JJ1	PUWV92701011	Lead
LC7401	EXCEMT103DC	EMI Filter
N7401	XANT322	Neon Lamp
SG7401	AG15C152FK2M	Spark Gap
SG7402	AG15C152FK2M	Spark Gap
SG7411	DSP301NS00B	Spark Gap
SG7421	DSP301NS00B	Spark Gap
SG7431	DSP301NS00B	Spark Gap
	CVT3243-1278	CRT Socket
	PUFGSTM4CNK	FG Strap
	PUKR9270136	Shield
	PUKR9270137	Shield
	UAMS-03-0	Clamper

D-Board

Ref. No.	Part No.	Description
	RESISTORS	
R3102	ERJ6GEYJ123	C 12k J 1/10W
R3103	ERJ6GEYJ393	C 39k J 1/10W
R3105	ERJ6GEYJ183	C 18k J 1/10W
R3106	ERJ6GEYJ122	C 1.2k J 1/10W
R3107	ERJ6GEYJ122	C 1.2k J 1/10W
R3108	ERJ6GEYJ151	C 150 J 1/10W
R3109	ERJ6GEYJ392	C 3.9k J 1/10W
R3110	ERJ6GEYJ331	C 330 J 1/10W
R3111	ERJ6GEYJ331	C 330 J 1/10W
R3112	ERJ6GEYJ331	C 330 J 1/10W
R3113	ERJ6GEYJ152	C 1.5k J 1/10W
R3114	ERJ6GEYJ681	C 680 J 1/10W
R3115	ERJ6GEYJ681	C 680 J 1/10W
R3116	ERJ6GEYJ152	C 1.5k J 1/10W
R3117	ERJ6GEYJ102	C 1k J 1/10W
R3118	ERJ6GEYJ122	C 1.2k J 1/10W
R3119	ERJ6GEYJ223	C 22k J 1/10W
R3120	ERJ6GEYJ223	C 22k J 1/10W
R3121	ERJ6GEYJ222	C 2.2k J 1/10W
R3123	ERJ6GEYJ750	C 75 J 1/10W
R3124	ERJ6GEYJ750	C 75 J 1/10W
R3125	ERJ6GEYJ104	C 100k J 1/10W
R3126	ERJ6GEYJ104	C 100k J 1/10W
R3127	ERJ6GEYJ104	C 100k J 1/10W
R3128	ERJ6GEYJ102	C 1k J 1/10W
R3130	ERJ6GEYJ102	C 1k J 1/10W
R3131	ERJ6GEYJ681	C 680 J 1/10W
R3132	ERJ6GEYJ681	C 680 J 1/10W
R3133	ERJ6GEYJ123	C 12k J 1/10W
R3134	ERJ6GEYJ182	C 1.8k J 1/10W
R3143	ERJ6GEYJ152	C 1.5k J 1/10W
R3144	ERJ6GEYJ102	C 1k J 1/10W
R3145	ERJ6GEYJ223	C 22k J 1/10W
R3146	ERJ6GEYJ122	C 1.2k J 1/10W
R3147	ERJ6GEYJ223	C 22k J 1/10W
R3148	ERJ6GEYJ222	C 2.2k J 1/10W
R3151	ERJ6GEYJ101	C 100 J 1/10W
R3153	ERJ6GEYJ101	C 100 J 1/10W
R3154	ERJ6GEYJ101	C 100 J 1/10W
R3155	ERJ6GEYJ152	C 1.5k J 1/10W
R3156	ERJ6GEYJ152	C 1.5k J 1/10W
R3157	ERJ6GEYJ152	C 1.5k J 1/10W
R3158	ERJ6GEYJ101	C 100 J 1/10W
R3201	ERJ6GEYJ123	C 12k J 1/10W
R3202	ERJ6GEYJ123	C 12k J 1/10W
R3203	ERJ6GEYJ562	C 5.6k J 1/10W
R3204	ERJ6GEYJ101	C 100 J 1/10W
R3205	ERJ6GEYJ562	C 5.6k J 1/10W
R3206	ERJ6GEYJ391	C 390 J 1/10W
R3207	ERJ6GEYJ391	C 390 J 1/10W
R3208	ERJ6GEYJ101	C 100 J 1/10W
R3209	ERJ6GEYJ332	C 3.3k J 1/10W
R3210	ERJ6GEYJ104	C 100k J 1/10W
R3211	ERJ6GEYJ750	C 75 J 1/10W
R3212	ERDS1TJ181	C 180 J 1/2W
R3213	ERJ6GEYJ104	C 100k J 1/10W
R3214	ERJ6GEYJ750	C 75 J 1/10W
R3215	ERDS1TJ181	C 180 J 1/2W
R3216	ERJ6GEYJ104	C 100k J 1/10W
R3217	ERJ6GEYJ750	C 75 J 1/10W
R3218	ERDS1TJ181	C 180 J 1/2W
R3219	ERJ6GEYJ152	C 1.5k J 1/10W
R3220	ERJ6GEYJ331	C 330 J 1/10W
R3221	ERJ6GEYJ184	C 180k J 1/10W
R3222	ERJ6GEYJ822	C 8.2k J 1/10W
R3223	ERJ6GEYJ103	C 10k J 1/10W
R3224	ERJ6GEYJ104	C 100k J 1/10W
R3225	ERJ6GEYJ102	C 1k J 1/10W
R3226	ERJ6GEYJ103	C 10k J 1/10W
R3227	ERJ6GEYJ102	C 1k J 1/10W
R3228	ERJ6GEYJ103	C 10k J 1/10W
R3229	ERJ6GEYJ101	C 100 J 1/10W
R3230	ERJ6GEYJ563	C 56k J 1/10W

Ref. No.	Part No.	Description			
R3231	ERJ6GEYJ561	C	560	J	1/10W
R3232	ERJ6GEYJ181	C	180	J	1/10W
R3233	ERJ6GEYJ224	C	220k	J	1/10W
R3234	ERJ6GEYJ562	C	5.6k	J	1/10W
R3235	ERJ6GEYJ102	C	1k	J	1/10W
R3236	ERJ6GEYJ152	C	1.5k	J	1/10W
R3237	ERJ6GEYJ102	C	1k	J	1/10W
R3238	ERJ6GEYJ184	C	180k	J	1/10W
R3239	ERJ6GEYJ822	C	8.2k	J	1/10W
R3240	ERJ6GEYJ102	C	1k	J	1/10W
R3241	ERJ6GEYJ102	C	1k	J	1/10W
R3301	ERJ6GEYJ103	C	10k	J	1/10W
R3302	ERJ6GEYJ103	C	10k	J	1/10W
R3303	ERQ14AJ470P	F	47	J	1/4W
R3304	ERG2ANJ120H	M	12	J	2W
R3305	ERJ6GEYJ331	C	330	J	1/10W
R3306	ERJ6GEYJ562	C	5.6k	J	1/10W
R3307	ERJ6GEYJ753	C	75k	J	1/10W
R3308	ERJ6GEYJ224	C	220k	J	1/10W
R3309	ERJ6ENF1501	C	1.50k	F	1/10W
R3310	ERJ6ENF1501	C	1.50k	F	1/10W
R3311	ERJ6GEYJ224	C	220k	J	1/10W
R3312	ERJ6GEYJ224	C	220k	J	1/10W
R3313	ERJ6GEYJ563	C	56k	J	1/10W
R3314	ERJ6GEYJ391	C	390	J	1/10W
R3315	ERJ6GEYJ391	C	390	J	1/10W
R3316	ERJ6GEYJ152	C	1.5k	J	1/10W
R3317	ERJ6GEYJ272	C	2.7k	J	1/10W
R3318	ERJ6GEYJ302	C	3k	J	1/10W
R3319	ERJ6GEYJ302	C	3k	J	1/10W
R3320	ERJ6GEYJ103	C	10k	J	1/10W
R3321	ERJ6GEYJ272	C	2.7k	J	1/10W
R3322	ERJ6GEYJ272	C	2.7k	J	1/10W
R3323	ERJ6GEYJ392	C	3.9k	J	1/10W
R3324	ERJ6GEYJ272	C	2.7k	J	1/10W
R3325	ERJ6GEYJ272	C	2.7k	J	1/10W
R3326	ERJ6GEYJ272	C	2.7k	J	1/10W
R3327	ERJ6GEYJ272	C	2.7k	J	1/10W
R3328	ERJ6GEYJ272	C	2.7k	J	1/10W
R3329	ERJ6GEYJ562	C	5.6k	J	1/10W
R3330	ERJ6GEYJ224	C	220k	J	1/10W
R3331	ERJ6GEYJ101	C	100	J	1/10W
R3332	ERJ6GEYJ272	C	2.7k	J	1/10W
R3333	ERJ6GEYJ101	C	100	J	1/10W
R3334	ERJ6GEYJ272	C	2.7k	J	1/10W
R3335	ERJ6GEYJ101	C	100	J	1/10W
R3336	ERJ6GEYJ272	C	2.7k	J	1/10W
R3337	ERJ6GEYJ103	C	10k	J	1/10W
R3338	ERJ6GEYJ272	C	2.7k	J	1/10W
R3350	ERJ6GEYJ102	C	1k	J	1/10W
R3351	ERJ6GEYJ102	C	1k	J	1/10W
R3352	ERJ6GEYJ103	C	10k	J	1/10W

Ref. No.	Part No.	Description			
R3353	ERJ6GEYJ103	C	10k	J	1/10W
R3354	ERJ6GEYJ102	C	1k	J	1/10W
R3355	ERJ6GEYJ103	C	10k	J	1/10W
R3356	ERJ6GEYJ103	C	10k	J	1/10W
R3357	ERJ6GEYJ102	C	1k	J	1/10W
R3358	ERJ6GEYJ103	C	10k	J	1/10W
R3359	ERJ6GEYJ103	C	10k	J	1/10W
R3360	ERJ6GEYJ102	C	1k	J	1/10W
R3361	ERJ6GEYJ562	C	5.6k	J	1/10W
R3362	ERJ6GEYJ562	C	5.6k	J	1/10W
R3363	ERJ6GEYJ101	C	100	J	1/10W
R3364	ERJ6GEYJ102	C	1k	J	1/10W
R3365	ERJ6GEYJ101	C	100	J	1/10W
R3366	ERJ6GEYJ472	C	4.7k	J	1/10W
R3367	ERJ6GEYJ101	C	100	J	1/10W
R3368	ERJ6GEYJ472	C	4.7k	J	1/10W
R3369	ERJ6GEYJ101	C	100	J	1/10W
R3370	ERJ6GEYJ472	C	4.7k	J	1/10W
R3371	ERJ6GEYJ750	C	75	J	1/10W
R3372	ERJ6GEYJ750	C	75	J	1/10W
R3373	ERJ6GEYJ750	C	75	J	1/10W
R3551	ERJ6GEYJ750	C	75	J	1/10W
R3552	ERJ6GEYJ750	C	75	J	1/10W
R3553	ERJ6GEYJ750	C	75	J	1/10W
R3554	ERJ6GEYJ750	C	75	J	1/10W
R3557	ERDS2TJ750	C	75	J	1/4W
R3558	ERDS2TJ750	C	75	J	1/4W
R3559	ERDS2TJ750	C	75	J	1/4W
R3560	ERJ6GEYJ220	C	22	J	1/10W
R3561	ERJ6GEYJ152	C	1.5k	J	1/10W
R3803	ERJ6GEYJ561	C	560	J	1/10W
R3804	ERJ6GEYJ561	C	560	J	1/10W
R3805	ERQ14AJ2R0P	F	2	J	1/4W
R3806	ERQ14AJ2R0P	F	2	J	1/4W
R3807	ERJ6GEYJ103	C	10k	J	1/10W
R3808	ERJ6GEYJ103	C	10k	J	1/10W
R3809	ERJ6GEYJ103	C	10k	J	1/10W
R3810	ERJ6GEYJ103	C	10k	J	1/10W
R3811	ERJ6GEYJ151	C	150	J	1/10W
R3812	ERJ6GEYJ682	C	6.8k	J	1/10W
R3813	ERJ6GEYJ272	C	2.7k	J	1/10W
R3814	ERJ6GEYJ151	C	150	J	1/10W
R3815	ERJ6GEYJ101	C	100	J	1/10W
R3816	ERJ6GEYJ101	C	100	J	1/10W
R3817	ERJ6GEYJ103	C	10k	J	1/10W
R3818	ERJ6GEYJ103	C	10k	J	1/10W
R3819	ERJ6GEYJ682	C	6.8k	J	1/10W
R3820	ERJ6GEYJ472	C	4.7k	J	1/10W
R3821	ERJ6GEYJ682	C	6.8k	J	1/10W
R3822	ERJ6GEYJ472	C	4.7k	J	1/10W
R3823	ERDS1TJ391	C	390	J	1/2W
R3824	ERJ6GEYJ224	C	220k	J	1/10W

Ref. No.	Part No.	Description			
R3825	ERJ6GEYJ224	C	220k	J	1/10W
R3826	ERJ6GEYJ101	C	100	J	1/10W
R3827	ERJ6GEYJ101	C	100	J	1/10W
R3828	ERDS2TJ101	C	100	J	1/4W
R3829	ERJ6GEYJ104	C	100k	J	1/10W
R3830	ERJ6GEYJ104	C	100k	J	1/10W
R3831	ERJ6GEYJ104	C	100k	J	1/10W
R3832	ERJ6GEYJ104	C	100k	J	1/10W
R3833	ERJ6GEYJ101	C	100	J	1/10W
R3834	ERDS2TJ101	C	100	J	1/4W
R3835	ERJ6GEYJ224	C	220k	J	1/10W
R3836	ERJ6GEYJ224	C	220k	J	1/10W
R3837	ERJ6GEYJ104	C	100k	J	1/10W
R3838	ERJ6GEYJ224	C	220k	J	1/10W
R3839	ERJ6GEYJ104	C	100k	J	1/10W
R3840	ERJ6GEYJ101	C	100	J	1/10W
R3841	ERJ6GEYJ104	C	100k	J	1/10W
R3842	ERJ6GEYJ104	C	100k	J	1/10W
R3843	ERJ6GEYJ224	C	220k	J	1/10W
R3844	ERJ6GEYJ224	C	220k	J	1/10W
R3845	ERJ6GEYJ224	C	220k	J	1/10W
R3846	ERJ6GEYJ105	C	1M	J	1/10W
R3847	ERJ6GEYJ105	C	1M	J	1/10W
R3848	ERJ6GEYJ101	C	100	J	1/10W
R3849	ERJ6GEYJ101	C	100	J	1/10W
R3850	ERJ6GEYJ104	C	100k	J	1/10W
R3851	ERJ6GEYJ104	C	100k	J	1/10W
R3852	ERJ6GEYJ104	C	100k	J	1/10W
R3853	ERJ6GEYJ104	C	100k	J	1/10W
R3854	ERJ6GEYJ224	C	220k	J	1/10W
R3855	ERJ6GEYJ224	C	220k	J	1/10W
R3856	ERG1ANJ271H	M	270	J	1W
R3857	ERF5AK3R3H	W	3.3	K	5W
R3861	ERDS2TJ103	C	10k	J	1/4W
R3862	ERDS1TJ331	C	330	J	1/2W
JD001	ERJ6GEY0R00	C	0		1/10W
JD002	ERJ6GEY0R00	C	0		1/10W
JD003	ERJ6GEY0R00	C	0		1/10W
JD004	ERJ6GEY0R00	C	0		1/10W
JD005	ERJ6GEY0R00	C	0		1/10W
JD006	ERJ6GEY0R00	C	0		1/10W
JD007	ERJ6GEY0R00	C	0		1/10W
JD008	ERJ6GEY0R00	C	0		1/10W
JD009	ERJ6GEY0R00	C	0		1/10W
JD010	ERJ6GEY0R00	C	0		1/10W
JD011	ERJ6GEY0R00	C	0		1/10W
JD012	ERJ6GEY0R00	C	0		1/10W
JD013	ERJ6GEY0R00	C	0		1/10W
JD014	ERJ6GEY0R00	C	0		1/10W
JD021	ERJ6GEY0R00	C	0		1/10W
JD022	ERJ6GEY0R00	C	0		1/10W
JD023	ERJ6GEY0R00	C	0		1/10W

Ref. No.	Part No.	Description			
JD025	ERJ6GEY0R00	C	0		1/10W
VR3101	EVND8AA03B52	NTSC Y/C SEP ADJ. (500B)			
VR3301	EVND8AA03B53	SUB CONTRAST ADJ. (5kB)			
		CAPACITORS			
C3101	KCEA1CKN470E	E	47		16V
C3102	ECUX1H103KBG	C	0.01	K	50V
C3103	KCEA1CKA100E	E	10		16V
C3104	KCEA1CU470E	E	47		16V
C3105	ECUX1H103KBG	C	0.01	K	50V
C3106	ECUX1H103KBG	C	0.01	K	50V
C3107	ECUX1H103KBG	C	0.01	K	50V
C3108	KCEA1CU100E	E	10		16V
C3109	ECUX1H103KBG	C	0.01	K	50V
C3110	KCEA1CU470E	E	47		16V
C3111	ECUX1H103KBG	C	0.01	K	50V
C3112	KCEA1CU100E	E	10		16V
C3113	KCEA1CKN470E	E	47		16V
C3114	KCEA1CKN470E	E	47		16V
C3115	ECQB1H103JFW	P	0.01	J	50V
C3116	KCEA1CKN470E	E	47		16V
C3117	KCEA1CN470UE	E	47		16V
C3118	ECQB1H103JFW	P	0.01	J	50V
C3119	KCEA1CU470E	E	47		16V
C3120	ECUX1H103KBG	C	0.01	K	50V
C3124	KCEA1CU470E	E	47		16V
C3125	ECUX1H103KBG	C	0.01	K	50V
C3126	KCEA1CKA470E	E	47		16V
C3127	ECQB1H103JFW	P	0.01	J	50V
C3128	ECUX1H391JCG	C	390p	J	50V
C3201	ECUX1H103KBG	C	0.01	K	50V
C3202	KCEA1CU100E	E	10		16V
C3203	ECUX1H103KBG	C	0.01	K	50V
C3204	KCEA1CU100E	E	10		16V
C3205	KCEA1CU100E	E	10		16V
C3206	KCEA1CU220E	E	22		16V
C3207	ECUX1H103KBG	C	0.01	K	50V
C3209	ECKW1H103ZF	C	0.01	Z	50V
C3210	ECUX1H103KBG	C	0.01	K	50V
C3211	KCEA1CU220E	E	22		16V
C3212	KCEA1CN470UE	E	47		16V
C3213	KCEA1AU102E	E	1000		10V
C3214	KCEA1AU102E	E	1000		10V
C3215	KCEA1AU102E	E	1000		10V
C3216	KCEA1HN3R3UE	E	3.3		50V
C3217	ECUX1H103KBG	C	0.01	K	50V
C3218	KCEA1CU100E	E	10		16V
C3219	ECQB1H104JFW	P	0.1	J	50V
C3220	ECQB1H104JFW	P	0.1	J	50V
C3221	KCEA1CN100UE	E	10		16V
C3223	KCEA1HUR47E	E	0.47		50V
C3224	KCEA1HN010UE	E	1		50V

Ref. No.	Part No.	Description			
C3225	ECUX1H103KBG	C	0.01	K	50V
C3226	KCEA1CU100E	E	10		16V
C3230	KCEA0JU101	E	100		6.3V
C3237	ECUX1H471KBN	C	470p	K	50V
C3301	ECQB1H561JFW	P	560p	J	50V
C3302	ECQB1H561JFW	P	560p	J	50V
C3303	KCEA1CU100E	E	10		16V
C3304	ECUX1H103KBG	C	0.01	K	50V
C3305	ECUX1H103KBG	C	0.01	K	50V
C3306	KCEA1CU221E	E	220		16V
C3307	ECUX1H103KBG	C	0.01	K	50V
C3308	ECUX1H103KBG	C	0.01	K	50V
C3309	KCEA1CU470E	E	47		16V
C3310	ECUX1H103KBG	C	0.01	K	50V
C3311	KCEA1HU010E	E	1		50V
C3312	ECQB1H223JFW	P	0.022	J	50V
C3313	ECUX1H392KBN	C	3900p	K	50V
C3314	KCEA1HU010E	E	1		50V
C3315	KCEA1HN4R7UE	E	4.7		50V
C3316	KCEA1HU4R7E	E	4.7		50V
C3317	KCEA1HU4R7E	E	4.7		50V
C3318	KCEA1HN2R2UE	E	2.2		50V
C3319	ECQB1H103JFW	P	0.01	J	50V
C3320	ECQB1H103JFW	P	0.01	J	50V
C3321	ECQV1H474JMW	TF	0.47	J	50V
C3322	ECQB1H103JFW	P	0.01	J	50V
C3323	ECSF1CE105BB	T	1	M	16V
C3324	ECSF1CE105BB	T	1	M	16V
C3325	ECUX1H103KBG	C	0.01	K	50V
C3326	ECUX1H470JCG	C	47p	J	50V
C3327	ECUX1H330JCG	C	33p	J	50V
C3328	ECUX1H101JCG	C	100p	J	50V
C3329	ECUX1H330JCG	C	33p	J	50V
C3330	ECUX1H103KBG	C	0.01	K	50V
C3331	ECUX1H103KBG	C	0.01	K	50V
C3332	ECUX1H470JCG	C	47p	J	50V
C3334	ECQB1H104JFW	P	0.1	J	50V
C3335	ECQB1H104JFW	P	0.1	J	50V
C3337	ECUX1H103KBG	C	0.01	K	50V
C3338	ECUX1H103KBG	C	0.01	K	50V
C3339	ECUX1H103KBG	C	0.01	K	50V
C3340	ECUX1H103KBG	C	0.01	K	50V
C3341	ECUX1H103KBG	C	0.01	K	50V
C3342	ECUX1H103KBG	C	0.01	K	50V
C3343	ECQB1H104JFW	P	0.1	J	50V
C3344	ECQB1H104JFW	P	0.1	J	50V
C3345	ECQB1H104JFW	P	0.1	J	50V
C3346	ECQB1H104JFW	P	0.1	J	50V
C3347	ECQB1H104JFW	P	0.1	J	50V
C3348	ECQB1H104JFW	P	0.1	J	50V
C3349	ECQV1H474JMW	TF	0.47	J	50V
C3350	ECUX1H104ZFX	C	0.1	Z	50V

Ref. No.	Part No.	Description			
C3351	KCEA1CU221E	E	220		16V
C3357	KCEA1CU220E	E	22		16V
C3358	ECUX1H103KBG	C	0.01	K	50V
C3361	KCEA1HU010E	E	1		50V
C3362	KCEA1HU010E	E	1		50V
C3363	KCEA1HU010E	E	1		50V
C3364	KCEA1CU100E	E	10		16V
C3365	ECUX1H221JCG	C	220p	J	50V
C3366	ECUX1H221JCG	C	220p	J	50V
C3367	ECUX1H221JCG	C	220p	J	50V
C3368	KCEA0JU101	E	100		6.3V
C3369	KCEA0JU101	E	100		6.3V
C3370	KCEA0JU101	E	100		6.3V
C3501	ECUX1H121JCG	C	120p	J	50V
C3502	ECUX1H221JCG	C	220p	J	50V
C3504	ECUX1H152KBN	C	1500p	K	50V
C3510	KCA1AM102E	E	1000		10V
C3801	KCEA1EU101E	E	100		25V
C3802	ECUX1H103KBG	C	0.01	K	50V
C3803	KCA1VM222G	E	2200		35V
C3804	ECUX1H103KBG	C	0.01	K	50V
C3805	ECKW1H103ZF	C	0.01	Z	50V
C3806	ECKW1H103ZF	C	0.01	Z	50V
C3807	KCEA1VU101E	E	100		35V
C3808	KCEA1VU330E	E	33		35V
C3809	KCEA1VU330E	E	33		35V
C3810	KCA1JM102	E	1000		63V
C3811	ECQB1H104JFW	P	0.1	J	50V
C3812	ECQB1H104JFW	P	0.1	J	50V
C3813	KCA1VM102	E	1000		35V
C3814	ECQB1H222JFW	P	2200p	J	50V
C3815	KCEA1VU220E	E	22		35V
C3816	ECQB1H222JFW	P	2200p	J	50V
C3817	KCEA1VU220E	E	22		35V
C3818	KCEA1HU010E	E	1		50V
C3819	ECKW1H103ZF	C	0.01	Z	50V
C3820	ECKW1H103ZF	C	0.01	Z	50V
C3821	ECQV1H334JMW	TF	0.33	J	50V
C3822	ECQB1H103JFW	P	0.01	J	50V
C3823	KCEA1CU101E	E	100		16V
C3824	ECUX1H103KBG	C	0.01	K	50V
C3825	ECQB1H103JFW	P	0.01	J	50V
C3826	ECQV1H334JMW	TF	0.33	J	50V
C3827	ECKW1H103ZF	C	0.01	Z	50V
C3828	ECKW1H103ZF	C	0.01	Z	50V
C3829	KCEA1HU010E	E	1		50V
C3830	KCEA1CN100UE	E	10		16V
C3831	KCEA1CU100E	E	10		16V
C3832	ECUX1H103KBG	C	0.01	K	50V
C3833	KCEA1CU100E	E	10		16V
C3834	KCEA1CKN100E	E	10		16V

Ref. No.	Part No.	Description
C3835	KCEA1CKN100E	E 10 16V
C3836	KCEA1CKN100E	E 10 16V
C3837	KCEA1CKN100E	E 10 16V
C3838	KCEA1CN100UE	E 10 16V
C3839	KCEA1CN100UE	E 10 16V
C3840	KCEA1CKN100E	E 10 16V
C3841	KCEA1CKN100E	E 10 16V
C3842	KCEA1CN100UE	E 10 16V
C3843	KCEA1CN100UE	E 10 16V
	DIODES	
D3101	RD13ESAB2	Zener Diode (Vz=13V)
D3102	RD13ESAB2	Zener Diode (Vz=13V)
D3103	RD13ESAB2	Zener Diode (Vz=13V)
D3104	RD13ESAB2	Zener Diode (Vz=13V)
D3105	RD13ESAB2	Zener Diode (Vz=13V)
D3106	RD13ESAB2	Zener Diode (Vz=13V)
D3107	RD13ESAB2	Zener Diode (Vz=13V)
D3108	RD13ESAB2	Zener Diode (Vz=13V)
D3109	RD13ESAB2	Zener Diode (Vz=13V)
D3201	MA165	Diode
D3202	MA165	Diode
D3203	MA165	Diode
D3801	RD5.1ESAB2	Zener Diode (Vz=5.1V)
	INTEGRATED CIRCUITS	
IC3101	NJM2245D	IC
IC3201	MM1112XS	IC
IC3202	MM1111XS	IC
IC3203	NJM2245D	IC
IC3204	NJM2245D	IC
IC3205	LA7213	IC
IC3206	LA7213	IC
IC3207	TC4053BP	IC
IC3301	TC4538BP	IC
IC3302	NJM78L05A	+5V Regulator
IC3303	NJM78L09A	+9V Regulator
IC3304	µPC78N12H	+12V Regulator
IC3305	TA8867AN	IC (Decoder)
IC3801	NJM78L09A	+9V Regulator
IC3802	LA4270	IC (Audio Amp.)
IC3803	CXA1279AS	IC (Audio Pre-Amp.)
IC3804	TC74HC4052AP	IC
	COILS	
L3101	SDL-4382	Delay Line
L3102	EQK7ES729B	Variable Inductor
L3103	SDL-4382	Delay Line
L3104	EIL7EN008Q	Variable Inductor
L3302	EIK7ES002B	Variable Inductor
L3303	EIK7ES002B	Variable Inductor
L3551	ZJSC-R10-470	EMI Filter
L3552	ZJSC-R10-470	EMI Filter
L3553	ZJSC-R10-470	EMI Filter
L3554	ZJSC-R47-121	EMI Filter

Ref. No.	Part No.	Description
L3555	ZJSC-R47-121	EMI Filter
	TRANSISTORS	
Q3101	KSC1623	Transistor
Q3102	KSC1623	Transistor
Q3103	KSC1623	Transistor
Q3104	KSC1623	Transistor
Q3105	KSC1623	Transistor
Q3106	KSC1623	Transistor
Q3107	KSC1623	Transistor
Q3111	KSC1623	Transistor
Q3112	KSC1623	Transistor
Q3201	KSC1623	Transistor
Q3202	KSA812	Transistor
Q3203	2SC1317-R	Tr (Video Output)
Q3204	2SC1317-R	Tr (Y Output)
Q3205	2SC1317-R	Tr (C Output)
Q3206	KSC1623	Transistor
Q3207	KSC1623	Transistor
Q3208	KSC1623	Transistor
Q3209	2SC3398	Transistor
Q3210	KSC1623	Transistor
Q3211	KSC1623	Transistor
Q3212	KSA812	Transistor
Q3213	KSC1623	Transistor
Q3214	KSC1623	Transistor
Q3301	2SC3398	Transistor
Q3302	2SC3398	Transistor
Q3303	2SC3398	Transistor
Q3304	2SC3398	Transistor
Q3305	KSC1623	Transistor
Q3306	KSC1623	Transistor
Q3307	KSA812	Transistor
Q3308	KSA812	Transistor
Q3309	KSA812	Transistor
Q3310	KSC1623	Transistor
Q3311	KSC1623	Transistor
Q3312	KSC1623	Transistor
Q3801	KSC1623	Transistor
	OTHERS	
CO-9D	051A-9003	3P Connector
CO-10D	051A-9103	3P Connector (Black)
CO-11I	T6135-AAED	RCA Jacks
CO-12I	YKF51-5535	S-Video Terminal
CO-13I	T6135-AAED	RCA Jacks
CO-14I	YKF51-5535	S-Video Terminal
CO-15I	P2283-A	BNC Terminal
CO-16I	YKF51-5535	S-Video Terminal
CO-18I	T5899-AACD	RCA Jacks
CO-20I	T5899-AACD	RCA Jacks
CO-22I	PUET9270101	15S D-Sub

Ref. No.	Part No.	Description
CO-23I	PUET9270102	15S HD D-Sub
CO-24I	T5899-AACD	RCA Jacks
CO-26I	T5899-AACD	RCA Jacks
CO-28I	PUET9270103	9S D-Sub
CO-41D	051A-9106	6P Connector (Black)
CO-42D	051A-9107	7P Connector (Black)
CO-43D	051A-9007	7P Connector
CO-44D	051A-9103	3P Connector (Black)
CO-46D	B4B-EH	4P Connector
CO-47D	B6B-EH	6P Connector
CO-48D	051A-9104	4P Connector (Black)
CO-49D	B6B-EH	6P Connector
CO-53D	B10B-EH	10P Connector
DL3101	EFDBN645B95G	Ultrasonic Delay Line
DL3301	EFDEN645A41X	Ultrasonic Delay Line
LC3101	PUTL9270108	Filter
LC3102	PUTL9270109	Filter
SW3551	PASE30301	Termination Switch
SW3552	PASE30302	Dual Sync. Switch
SW3553	ESD1512221	Speaker Select Switch
X3301	CSB503F30	Ceramic Resonator
X3302	TSS816N1-443	Crystal Oscillator
X3303	TSS816N2-358	Crystal Oscillator
	PAUX37802	Ground Lug
	PUWX7270108	Panel
	PUKR9270133	Heat Sink/IC3802
	WS-2NS	Clamper
	XTV3+8J	Screw/CO-12I, CO-14I, CO-16I
	XTW3+6L	Screw/Panel
	XYN3+J10FX	Screw/IC3802

E-Board

Ref. No.	Part No.	Description
	RESISTORS	
R3501	ERDS2TJ750	C 75 J 1/4W
R3502	ERDS2TJ750	C 75 J 1/4W
R3503	ERDS2TJ750	C 75 J 1/4W
R3504	ERDS2TJ750	C 75 J 1/4W
R3505	ERDS2TJ750	C 75 J 1/4W
R3506	ERDS2TJ750	C 75 J 1/4W
R3507	ERDS2TJ152	C 1.5k J 1/4W
R3508	ERDS2TJ220	C 22 J 1/4W
R3509	ERDS2TJ391	C 390 J 1/4W
	CAPACITORS	
C3501	ECCW1H121J	C 120p J 50V
C3502	KCEA1CU100E	E 10 16V
C3503	ECFW1H103MR	C 0.01 M 50V
C3504	ECKW1H152KB	C 1500p K 50V
C3505	ECCW1H221JC4	C 220p J 50V

Ref. No.	Part No.	Description
	COILS	
L3501	TU50M	EMI Filter
L3502	TU50M	EMI Filter
L3503	TU50M	EMI Filter
	OTHERS	
CO-46E	PUWV92701461	4P Coupler
CO-47E	PUWV92701471	6P Coupler
CO-54E	PUWV92701543	9P Coupler
CO-71E	PUWV9270171	3P Coupler
CO-3501	YKF51-5535	S-Video Terminal
CO-3502	YKC21-5464	RCA Jacks
CO-3503	PUET9270101	15S D-Sub
RM3501	GP1U801X	Remote Control Receiver
	AT-50	Tape
	GMM-C25H6-1	Screw/CO-3503
	KI-100M	Clamper
	KR16CC160928	Ferrite Core
	PUKR9270142	Shield
	PUKR9270146	Shield
	PUWV92701721	Ground Lead
	PUWV92701771	Ground Lead
	PUXA9270101	Sheet
	XTV3+8J	Screw

F-Board

Ref. No.	Part No.	Description
	RESISTORS	
R6502	ERDS2TJ221	C 220 J 1/4W
R6503	ERDS2TJ221	C 220 J 1/4W
R6504	ERDS2TJ221	C 220 J 1/4W
R6505	ERDS2TJ221	C 220 J 1/4W
R6506	ERDS2TJ221	C 220 J 1/4W
R6507	ERDS2TJ221	C 220 J 1/4W
R6508	ERDS2TJ221	C 220 J 1/4W
R6509	ERDS2TJ221	C 220 J 1/4W
R6510	ERDS2TJ221	C 220 J 1/4W
R6511	ERDS2TJ221	C 220 J 1/4W
	CAPACITOR	
C6501	KCEA1CU100E	E 10 16V
	DIODES	
D6501	LN342GPX	LED (Green)
D6502	LN442YPX	LED (Yellow)
D6503	LN342GPX	LED (Green)
D6504	LN342GPX	LED (Green)
D6505	LN342GPX	LED (Green)
D6506	LN342GPX	LED (Green)
D6507	LN342GPX	LED (Green)
D6508	LN442YPX	LED (Yellow)

Ref. No.	Part No.	Description
D6509	LN11WP23	LED
TRANSISTORS		
Q6501	2SA1348	Transistor
Q6502	2SA1348	Transistor
OTHERS		
CO-31F	PUWV9270131	10P Coupler
CO-32F	PUWV9270132	12P Coupler
CO-33F	PUWV9270133	4P Coupler
SW6501	EVQ23405R	KEY MODE
SW6502	EVQ23405R	BRIGHT/V. SIZE UP
SW6503	EVQ23405R	BRIGHT/V. SIZE DOWN
SW6504	EVQ23405R	CONTRAST/V. CENT UP
SW6505	EVQ23405R	CONTRAST/V. CENT DOWN
SW6506	EVQ23405R	COLOR/H. SIZE UP
SW6507	EVQ23405R	COLOR/H. SIZE DOWN
SW6508	EVQ23405R	TINT/H. CENT UP
SW6509	EVQ23405R	TINT/H. CENT DOWN
SW6510	EVQ23405R	SHARPNESS/PINCUSHION UP
SW6511	EVQ23405R	SHARPNESS/PINCUSHION DOWN
SW6512	EVQ23405R	VOLUME/TRAP UP
SW6513	EVQ23405R	VOLUME/TRAP DOWN
SW6514	EVQ23405R	MUTE
SW6515	EVQ23405R	AUTO
SW6516	EVQ23405R	LEFT
SW6517	EVQ23405R	RIGHT
SW6518	EVQ23405R	RESET
SW6519	EVQ23405R	DEGAUSS
SW6520	EVQ23405R	COLOR TEMP
SW6521	EVQ23405R	POWER
SW6522	DTS-4H	MONITOR SELECT
	PAMW35702	LED Holder
	PAMW35703	LED Holder
	PAMW35704	LED Holder
	PUKR9270141	Shield
	PUKY9270107	LED Spacer
	PUWV92701731	Ground Lead

H-Board

Ref. No.	Part No.	Description			
RESISTORS					
R901	ERDS2TJ470	C	47	J	1/4W
R902	ERDS2TJ682	C	6.8k	J	1/4W
R903	ERDS2TJ562	C	5.6k	J	1/4W
R904	ERDS2TJ272	C	2.7k	J	1/4W
R905	ERDS2TJ103	C	10k	J	1/4W
R906	ERDS2TJ472	C	4.7k	J	1/4W
R907	ERDS2TJ332	C	3.3k	J	1/4W
R908	ERDS2TJ105	C	1M	J	1/4W
R909	ERDS2TJ104	C	100k	J	1/4W
R910	ERDS2TJ103	C	10k	J	1/4W
R911	ERDS2TJ102	C	1k	J	1/4W
R912	ERDS2TJ182	C	1.8k	J	1/4W
R913	ERDS2TJ681	C	680	J	1/4W
R914	ERDS2TJ562	C	5.6k	J	1/4W
R915	ERDS2TJ333	C	33k	J	1/4W
R916	ERDS2TJ272	C	2.7k	J	1/4W
R917	ERDS2TJ472	C	4.7k	J	1/4W
R918	ERDS2TJ682	C	6.8k	J	1/4W
R919	**EVND2AA03B23**	**HV. PRE ADJUST (2kB)**			
R920	**ERDS2TJ222**	**C**	**2.2k**	**J**	**1/4W**
R921	ERDS2TJ152	C	1.5k	J	1/4W
R922	ERDS2TJ332	C	3.3k	J	1/4W
R923	ERDS2TJ221	C	220	J	1/4W
R924	ERDS2TJ182	C	1.8k	J	1/4W
R925	ERG1ANJ100H	M	10	J	1W
R926	ERDS2TJ103	C	10k	J	1/4W
R927	ERDS2TJ182	C	1.8k	J	1/4W
R928	ERDS2TJ100	C	10	J	1/4W
R929	ERDS2TJ182	C	1.8k	J	1/4W
R930	ERDS2TJ100	C	10	J	1/4W
R931	ERDS1TJ331	C	330	J	1/2W
R932	ERQ12HKR47P	F	0.47	K	1/2W
R933	ERG1ANJ181H	M	180	J	1W
R934	ERG2ANJ331H	M	330	J	2W
R935	ERDS2TJ433	C	43k	J	1/4W
R936	**EVND2AA03B24**	**HV. ADJUST (20kB)**			
R937	ERDS1TJ560	C	56	J	1/2W
R938	ERDS1TJ560	C	56	J	1/2W
R939	ERG2ANJ683H	M	68k	J	2W
R940	ERG2ANJ683H	M	68k	J	2W
R941	EROS2CKF1503	M	150k	F	1/4W
R942	ERDS1TJ150	C	15	J	1/2W
R943	ERDS2TJ223	C	22k	J	1/4W
R944	ERQ12HKR22P	F	0.22	K	1/2W
R945	ERQ14AJ2R2P	F	2.2	J	1/4W
R946	ERDS2TJ103	C	10k	J	1/4W
R947	**ERQ14AJ2R2P**	**F**	**2.2**	**J**	**1/4W**
R948	ERDS2TJ473	C	47k	J	1/4W
R949	ERDS2TJ103	C	10k	J	1/4W
R950	**EVND2AA03B24**	**X-RAY PROTECT (20kB)**			
R951	**ERDS2TJ562**	**C**	**5.6k**	**J**	**1/4W**
R952	**ERDS2TJ562**	**C**	**5.6k**	**J**	**1/4W**
R954	**EROS2CKF1001**	**M**	**1.00k**	**F**	**1/4W**
R955	**EROS2CKF1002**	**M**	**10.0k**	**F**	**1/4W**
R956	**EROS2CKF1001**	**M**	**1.00k**	**F**	**1/4W**
R957	**EROS2CKF1002**	**M**	**10.0k**	**F**	**1/4W**
R958	ERDS1TJ105	C	1M	J	1/2W
R959	ERDS1TJ105	C	1M	J	1/2W
R960	ERDS2TJ102	C	1k	J	1/4W
R961	ERDS2TJ103	C	10k	J	1/4W

Ref. No.	Part No.	Description			
R962	ERDS2TJ103	C	10k	J	1/4W
R963	ERDS2TJ104	C	100k	J	1/4W
R964	ERDS2TJ333	C	33k	J	1/4W
R965	ERG1SJ103P	M	10k	J	1W
R966	ERG1SJ563P	M	56k	J	1W
R967	ERDS2TJ682	C	6.8k	J	1/4W
R968	ERDS2TJ103	C	10k	J	1/4W
R969	ERDS2TJ103	C	10k	J	1/4W
R970	ERDS2TJ101	C	100	J	1/4W
R971	ERDS2TJ681	C	680	J	1/4W
R972	ERDS2TJ472	C	4.7k	J	1/4W
R973	ERDS2TJ103	C	10k	J	1/4W
R974	ERDS2TJ103	C	10k	J	1/4W
R975	ERDS2TJ330	C	33	J	1/4W
R976	ERDS2TJ330	C	33	J	1/4W
R977	ERG1ANJ473H	M	47k	J	1W
R978	ERQ12HKR47P	F	0.47	K	1/2W
R1901	ERDS1TJ152	C	1.5k	J	1/2W
R1902	ERG1ANJ104H	M	100k	J	1W
R1903	ERDS2TJ105	C	1M	J	1/4W
R1904	SPR1L15-204J	M	200k	J	1W
R1905	SPR1L15-204J	M	200k	J	1W
R1906	SPR1L15-204J	M	200k	J	1W
R1907	SPR1L15-184J	M	180k	J	1W
R1908	SPR1L15-184J	M	180k	J	1W
R1909	ERDS2TJ183	C	18k	J	1/4W
R1910	ERG2SJ104H	M	100k	J	2W
R1911	ERG2SJ104H	M	100k	J	2W
R1912	ERG2SJ104H	M	100k	J	2W
R1913	ERG2SJ104H	M	100k	J	2W
R1914	ERG2SJ104H	M	100k	J	2W
R1915	ERG2SJ104H	M	100k	J	2W
R1918	ERDS2TJ102	C	1k	J	1/4W
R1919	ERDS2TJ102	C	1k	J	1/4W
R1920	ERDS2TJ222	C	2.2k	J	1/4W
R1921	ERDS2TJ222	C	2.2k	J	1/4W
R1922	ERDS2TJ104	C	100k	J	1/4W
R1923	ERDS2TJ392	C	3.9k	J	1/4W
R1924	ERDS2TJ393	C	39k	J	1/4W
R1925	ERDS2TJ103	C	10k	J	1/4W
R1926	EVND2AA03B14	H. DF (10kB)			
R1927	EVND2AA03B14	V. DF (10kB)			
R1928	SPR1L15-204J	M	200k	J	1W
		CAPACITORS			
C901	PUCF9270110	MP	1200p	J	1.25kV
C902	PUCF9270111	MP	3900p	J	1.25kV
C903	PUCF9270112	MP	5600p	J	1.25kV
C904	PUCF9270113	MP	0.015	J	1.25kV
C905	KCEA1CU100E	E	10		16V
C906	KCEA1CU100E	E	10		16V
C907	KCA2VHG470	E	47		350V

Ref. No.	Part No.	Description			
C908	ECQB1H104JFW	P	0.1	J	50V
C909	ECQB1H103JFW	P	0.01	J	50V
C910	PUCF9270101	MP	4.7	J	250V
C911	KCEA1EU101E	E	100		25V
C912	KCEA1CU101E	E	100		16V
C913	ECFW1H104ZF5	C	0.1	Z	50V
C914	ECQB1H223JFW	P	0.022	J	50V
C915	ECFW1H104ZF5	C	0.1	Z	50V
C916	ECQB1H104JFW	P	0.1	J	50V
C917	ECCW1H270J	C	27p	J	50V
C918	KCEA1CU220E	E	22		16V
C919	PUCF9270101	MP	4.7	J	250V
C920	ECFW1H104ZF5	C	0.1	Z	50V
C921	KCEA1CU101E	E	100		16V
C922	KCA2EHG100E	E	10		250V
C923	KCEA1CU100E	E	10		16V
C924	KCA1VFQ471E	E	470		35V
C925	KCA1EHG221E	E	220		25V
C926	ECQB1H224KFW	P	0.22	K	50V
C927	KCEA1HU010E	E	1		50V
C928	KCEA2GGE4R7E	E	4.7		400V
C929	ECFW1H104ZF5	C	0.1	Z	50V
C930	KCA2DGE100E	E	10		200V
C931	ECQE6104KFB	MP	0.1	K	600V
C933	KCEA2GU220E	E	22		400V
C934	ECQB1H104JFW	P	0.1	J	50V
C935	KCEA1CU330E	E	33		16V
C936	ECFW1H104ZF5	C	0.1	Z	50V
C937	KCEA1CU330E	E	33		16V
C938	ECQB1H104JFW	P	0.1	J	50V
C1901	ECQE10333KF	MP	0.033	K	1kV
C1902	ECQE10333KF	MP	0.033	K	1kV
C1903	ECQE10333KF	MP	0.033	K	1kV
C1904	ECQB1H104JFW	P	0.1	J	50V
C1905	ECQB1H104JFW	P	0.1	J	50V
C1906	KCEA1HU2R2E	E	2.2		50V
C1907	ECQE10333KF	MP	0.033	K	1kV
		DIODES			
D901	MA165	Diode			
D902	MA165	Diode			
D903	S3L40-04P15	Diode			
D905	RD7.5ESAB2	Zener Diode (Vz=7.5V)			
D906	MA165	Diode			
D907	RD6.8ESAB3	Zener Diode (Vz=6.8V)			
D908	RD16ESAB1	Zener Diode (Vz=16V)			
D909	MA165	Diode			
D910	MA165	Diode			
D911	TVSRGP10J	Diode			
D912	RD12ESAB2	Zener Diode (Vz=12V)			
D913	D1NL20U	Diode			
D914	RD13ESAB2	Zener Diode (Vz=13V)			

Ref. No.	Part No.	Description
D915	MA165	Diode
D916	RD5.6ESAB1	Zener Diode (Vz=5.6V)
D917	RD18ESAB2	Zener Diode (Vz=18V)
D918	RD18ESAB2	Zener Diode (Vz=18V)
D919	AG01AV2	Diode
D920	MA165	Diode
D922	TVSRGP10J	Diode
D924	TVSRGP10J	Diode
D925	TVSRGP10J	Diode
D926	RD24ESAB2	Zener Diode (Vz=24V)
D927	RD24ESAB2	Zener Diode (Vz=24V)
D928	TVSRGP10J	Diode
D929	MA165	Diode
D930	MA165	Diode
D931	MA165	Diode
D932	MA165	Diode
D1901	ERA37-10	Diode
D1902	ERA37-10	Diode
D1903	ERA37-10	Diode
D1904	MA165	Diode
D1905	RD9.1ESAB2	Zener Diode (Vz=9.1V)
D1906	ERA37-10	Diode
	INTEGRATED CIRCUITS	
IC901	AN78N12H	±12V Regulator
(OR)	µPC78N12H	±12V Regulator
IC902	NJM2903D	IC (Comparator)
IC903	BA10358	IC (OP. Amp.)
IC904	HA17431P	Shunt Regulator
IC905	HA17431P	Shunt Regulator
IC906	NJM2902N	IC (OP. Amp.)
	COIL	
L901	PUTL9270101	Choke Coil
	TRANSISTORS	
Q901	2SK1358	FET
Q902	2SK1684	FET
Q903	2SK1684	FET
Q904	2SC1740S	Transistor
Q905	2SC1740S	Transistor
Q906	2SA933S	Transistor
Q907	2SC3402	Transistor
Q908	2SC3402	Transistor
Q909	2SK1642	FET
Q910	2SC1740S	Transistor
Q911	2SA933S	Transistor
Q912	2SC1740S	Transistor
Q913	2SA933S	Transistor
Q914	2SC3402	Transistor
Q915	2SA933S	Transistor
Q916	2SC1815NEWGR	Transistor
Q917	2SK1352	FET
Q919	2SC1740S	Transistor
Q920	2SC1473A	Transistor
Q921	2SA1480E	Transistor
Q922	2SC3402	Transistor
Q1901	2SC4710LS	Transistor
Q1902	2SC4710LS	Transistor
Q1903	2SA933S	Transistor
Q1904	2SC1740S	Transistor
Q1905	2SC1740S	Transistor
	TRANSFORMERS	
T901	PUKF8711K	FBT
T902	ETE13K73AY	Transformer
	OTHERS	
CO-08H	PUWV92701081	7P Coupler
CO-21H	PUWV9270121	9P Coupler
CO-55H	PUWV9270155	3P Coupler
CO-66H	PUWV9270166	4P Coupler
CO-91H	PUWV9270191	9P Coupler
H1	TMM15412-1	Clamper
SG1901	AG10C492GL3N	Spark Gap
	PAUC35646	Heat Sink/Q901
	PAUX37802	Ground Lug
	PAUX37803	Ground Lug
	PUKR9270130	Heat Sink/Q902, Q903
	PUKR9270139	Heat Sink/Q909, Q917, Q1902
	TC30A (TO3P)	Silicone Sheet/Q901
	TMM6428-1	Clamper
	TUC80798-3	Heat Sink/Q1901
	XTV3+8J	Screw/Q1901, PAUX37803, T901
	XYN3+J10FX	Screw/Q901-Q903, Q909, Q917, Q1902

N-Board

Ref. No.	Part No.	Description			
		RESISTORS			
R7001	ERJ6GEYJ104	C	100k	J	1/10W
R7002	ERJ6GEYJ104	C	100k	J	1/10W
R7003	ERJ6GEYJ104	C	100k	J	1/10W
R7004	ERDS2TJ821	C	820	J	1/4W
R7005	ERJ6ENF2701	C	2.70k	F	1/10W
R7006	ERJ6ENF2701	C	2.70k	F	1/10W
R7007	ERJ6GEYJ101	C	100	J	1/10W
R7008	ERJ6GEYJ562	C	5.6k	J	1/10W
R7009	ERJ6GEYJ683	C	68k	J	1/10W
R7010	ERJ6GEYJ101	C	100	J	1/10W
R7011	ERDS2TJ682	C	6.8k	J	1/4W
R7012	EVND8AA03B33	ABL ADJ. (3kB)			
R7013	ERJ6GEYJ122	C	1.2k	J	1/10W
R7016	ERJ6GEYJ562	C	5.6k	J	1/10W
R7017	ERJ6GEYJ152	C	1.5k	J	1/10W

Ref. No.	Part No.	Description			
R7018	ERJ6GEYJ392	C	3.9k	J	1/10W
R7019	ERJ6GEYJ182	C	1.8k	J	1/10W
R7021	ERDS2TJ101	C	100	J	1/4W
R7025	ERJ6GEYJ123	C	12k	J	1/10W
R7026	ERJ6GEYJ123	C	12k	J	1/10W
R7027	ERJ6GEYJ123	C	12k	J	1/10W
R7031	ERJ6GEYJ822	C	8.2k	J	1/10W
R7032	ERDS2TJ103	C	10k	J	1/4W
R7033	ERJ6GEYJ272	C	2.7k	J	1/10W
R7034	ERJ6GEYJ472	C	4.7k	J	1/10W
R7035	ERDS2TJ152	C	1.5k	J	1/4W
R7042	ERDS2TJ561	C	560	J	1/4W
R7043	ERJ6ENF2701	C	2.70k	F	1/10W
R7044	ERJ6ENF2701	C	2.70k	F	1/10W
R7048	ERDS2TJ122	C	1.2k	J	1/4W
R7049	ERDS2TJ103	C	10k	J	1/4W
R7061	ERJ6GEYJ102	C	1k	J	1/10W
R7062	ERJ6GEYJ332	C	3.3k	J	1/10W
R7063	ERJ6GEYJ332	C	3.3k	J	1/10W
R7064	ERJ6GEYJ101	C	100	J	1/10W
R7065	ERJ6GEYJ102	C	1k	J	1/10W
R7066	ERJ6GEYJ561	C	560	J	1/10W
R7067	ERJ6GEYJ103	C	10k	J	1/10W
R7068	ERJ6GEYJ124	C	120k	J	1/10W
R7069	ERJ6GEYJ474	C	470k	J	1/10W
R7070	ERG12SJ221P	M	220	J	1/2W
R7101	ERJ6GEYJ103	C	10k	J	1/10W
R7102	ERJ6GEYJ332	C	3.3k	J	1/10W
R7104	ERJ6GEYJ103	C	10k	J	1/10W
R7105	ERJ6GEYJ332	C	3.3k	J	1/10W
R7108	ERDS2TJ220	C	22	J	1/4W
R7109	ERJ6GEYJ220	C	22	J	1/10W
R7110	ERDS2TJ102	C	1k	J	1/4W
R7121	ERJ6GEYJ220	C	22	J	1/10W
R7122	ERJ6GEYJ682	C	6.8k	J	1/10W
R7123	ERDS2TJ822	C	8.2k	J	1/4W
R7124	ERJ6GEYJ822	C	8.2k	J	1/10W
R7125	ERDS2TJ681	C	680	J	1/4W
R7131	ERDS2TJ220	C	22	J	1/4W
R7132	ERJ6GEYJ182	C	1.8k	J	1/10W
R7133	ERJ6GEYJ101	C	100	J	1/10W
R7134	ERDS2TJ681	C	680	J	1/4W
R7135	ERJ6GEYJ101	C	100	J	1/10W
R7136	ERDS2TJ821	C	820	J	1/4W
R7137	ERDS2TJ221	C	220	J	1/4W
R7138	ERDS2TJ681	C	680	J	1/4W
R7139	ERDS2TJ122	C	1.2k	J	1/4W
R7140	ERJ6GEYJ101	C	100	J	1/10W
R7141	ERDS2TJ122	C	1.2k	J	1/4W
R7142	RDF16SJ391L	C	390	J	1/4W
R7143	ERJ6GEYJ100	C	10	J	1/10W
R7144	ERJ6GEYJ100	C	10	J	1/10W

Ref. No.	Part No.	Description			
R7151	RDF16SJ102L	C	1k	J	1/4W
R7152	ERDS2TJ181	C	180	J	1/4W
R7153	ERG2ANJ223H	M	22k	J	2W
R7154	RDF16SJ390L	C	39	J	1/4W
R7155	ERDS2TJ6R8	C	6.8	J	1/4W
R7156	RDF16SJ680L	C	68	J	1/4W
R7157	RDF16SJ821L	C	820	J	1/4W
R7158	ERG2SJ683P	M	68k	J	2W
R7159	RDF16SJ470L	C	47	J	1/4W
R7161	ERG2SJ273P	M	27k	J	2W
R7162	ERQ14AJ101P	F	100	J	1/4W
R7163	ERDS2TJ220	C	22	J	1/4W
R7164	ERDS2TJ220	C	22	J	1/4W
R7165	ERDS1TJ224	C	220k	J	1/2W
R7166	ERG1SJ683P	M	68k	J	1W
R7168	ERDS1FJ563P	C	56k	J	1/2W
R7169	ERDS2TJ682	C	6.8k	J	1/4W
R7170	ERJ6GEYJ683	C	68k	J	1/10W
R7171	ERJ6GEYJ272	C	2.7k	J	1/10W
R7172	ERJ6GEYJ272	C	2.7k	J	1/10W
R7173	ERJ6GEYJ681	C	680	J	1/10W
R7201	ERJ6GEYJ103	C	10k	J	1/10W
R7202	ERJ6GEYJ332	C	3.3k	J	1/10W
R7204	ERJ6GEYJ103	C	10k	J	1/10W
R7205	ERJ6GEYJ332	C	3.3k	J	1/10W
R7208	ERJ6GEYJ220	C	22	J	1/10W
R7209	ERJ6GEYJ220	C	22	J	1/10W
R7210	ERDS2TJ102	C	1k	J	1/4W
R7221	ERJ6GEYJ220	C	22	J	1/10W
R7222	ERJ6GEYJ682	C	6.8k	J	1/10W
R7223	ERDS2TJ822	C	8.2k	J	1/4W
R7224	ERJ6GEYJ822	C	8.2k	J	1/10W
R7225	ERDS2TJ681	C	680	J	1/4W
R7231	ERDS2TJ220	C	22	J	1/4W
R7232	ERJ6GEYJ182	C	1.8k	J	1/10W
R7233	ERJ6GEYJ101	C	100	J	1/10W
R7234	ERDS2TJ681	C	680	J	1/4W
R7235	ERJ6GEYJ101	C	100	J	1/10W
R7236	ERDS2TJ821	C	820	J	1/4W
R7237	ERDS2TJ221	C	220	J	1/4W
R7238	ERDS2TJ681	C	680	J	1/4W
R7239	ERDS2TJ122	C	1.2k	J	1/4W
R7240	ERJ6GEYJ101	C	100	J	1/10W
R7241	ERDS2TJ122	C	1.2k	J	1/4W
R7242	RDF16SJ391L	C	390	J	1/4W
R7243	ERJ6GEYJ100	C	10	J	1/10W
R7244	ERJ6GEYJ100	C	10	J	1/10W
R7251	RDF16SJ102L	C	1k	J	1/4W
R7252	ERDS2TJ181	C	180	J	1/4W
R7253	ERG2ANJ223H	M	22k	J	2W
R7254	RDF16SJ390L	C	39	J	1/4W
R7255	ERDS2TJ6R8	C	6.8	J	1/4W

Ref. No.	Part No.	Description			
R7256	RDF16SJ680L	C	68	J	1/4W
R7257	RDF16SJ821L	C	820	J	1/4W
R7258	ERG2SJ683P	M	68k	J	2W
R7259	RDF16SJ470L	C	47	J	1/4W
R7261	ERG2SJ273P	M	27k	J	2W
R7262	ERQ14AJ101P	F	100	J	1/4W
R7263	ERDS2TJ220	C	22	J	1/4W
R7264	ERDS2TJ220	C	22	J	1/4W
R7265	ERDS1TJ224	C	220k	J	1/2W
R7266	ERG1SJ683P	M	68k	J	1W
R7268	ERDS1FJ563P	C	56k	J	1/2W
R7269	ERDS2TJ682	C	6.8k	J	1/4W
R7270	ERJ6GEYJ683	C	68k	J	1/10W
R7271	ERJ6GEYJ272	C	2.7k	J	1/10W
R7272	ERJ6GEYJ272	C	2.7k	J	1/10W
R7273	ERJ6GEYJ681	C	680	J	1/10W
R7301	ERJ6GEYJ103	C	10k	J	1/10W
R7302	ERJ6GEYJ332	C	3.3k	J	1/10W
R7304	ERJ6GEYJ103	C	10k	J	1/10W
R7305	ERJ6GEYJ332	C	3.3k	J	1/10W
R7308	ERJ6GEYJ220	C	22	J	1/10W
R7309	ERJ6GEYJ220	C	22	J	1/10W
R7310	ERDS2TJ102	C	1k	J	1/4W
R7321	ERJ6GEYJ220	C	22	J	1/10W
R7322	ERJ6GEYJ682	C	6.8k	J	1/10W
R7323	ERDS2TJ822	C	8.2k	J	1/4W
R7324	ERJ6GEYJ822	C	8.2k	J	1/10W
R7325	ERDS2TJ681	C	680	J	1/4W
R7331	ERDS2TJ220	C	22	J	1/4W
R7332	ERJ6GEYJ182	C	1.8k	J	1/10W
R7333	ERJ6GEYJ101	C	100	J	1/10W
R7334	ERDS2TJ681	C	680	J	1/4W
R7335	ERJ6GEYJ101	C	100	J	1/10W
R7336	ERDS2TJ821	C	820	J	1/4W
R7337	ERDS2TJ221	C	220	J	1/4W
R7338	ERDS2TJ681	C	680	J	1/4W
R7339	ERDS2TJ122	C	1.2k	J	1/4W
R7340	ERJ6GEYJ101	C	100	J	1/10W
R7341	ERDS2TJ122	C	1.2k	J	1/4W
R7342	RDF16SJ391L	C	390	J	1/4W
R7343	ERJ6GEYJ100	C	10	J	1/10W
R7344	ERJ6GEYJ100	C	10	J	1/10W
R7351	RDF16SJ102L	C	1k	J	1/4W
R7352	ERDS2TJ181	C	180	J	1/4W
R7353	ERG2ANJ223H	M	22k	J	2W
R7354	RDF16SJ390L	C	39	J	1/4W
R7355	ERDS2TJ6R8	C	6.8	J	1/4W
R7356	RDF16SJ680L	C	68	J	1/4W
R7357	RDF16SJ821L	C	820	J	1/4W
R7358	ERG2SJ683P	M	68k	J	2W
R7359	RDF16SJ470L	C	47	J	1/4W
R7361	ERG2SJ273P	M	27k	J	2W
R7362	ERQ14AJ101P	F	100	J	1/4W
R7363	ERDS2TJ220	C	22	J	1/4W
R7364	ERDS2TJ220	C	22	J	1/4W
R7365	ERDS1TJ224	C	220k	J	1/2W
R7366	ERG1SJ683P	M	68k	J	1W
R7368	ERDS1FJ563P	C	56k	J	1/2W
R7369	ERDS2TJ682	C	6.8k	J	1/4W
R7370	ERJ6GEYJ683	C	68k	J	1/10W
R7371	ERJ6GEYJ272	C	2.7k	J	1/10W
R7372	ERJ6GEYJ272	C	2.7k	J	1/10W
R7373	ERJ6GEYJ681	C	680	J	1/10W
CAPACITORS					
C7001	ECKW1H103ZF	C	0.01	Z	50V
C7002	KCEA1CU470E	E	47		16V
C7003	ECKW1H103ZF	C	0.01	Z	50V
C7004	ECUX1H103ZFG	C	0.01	Z	50V
C7005	KCEA1CU470E	E	47		16V
C7007	ECUX1H103ZFG	C	0.01	Z	50V
C7008	KCEA1HU3R3E	E	3.3		50V
C7010	ECUX1H103ZFG	C	0.01	Z	50V
C7021	KCEA1CU101E	E	100		16V
C7031	ECCW1H680JC	C	68p	J	50V
C7032	ECUX1H471KBN	C	470p	K	50V
C7035	KCEA1CU101E	E	100		16V
C7036	KCEA1VGE470E	E	47		35V
C7037	KCEA1HGE220E	E	22		50V
C7041	KCEA1HGE010E	E	1		50V
C7042	ECUX1H104ZFX	C	0.1	Z	50V
C7045	KCEA1CGE470E	E	47		16V
C7046	ECUX1H103ZFG	C	0.01	Z	50V
C7047	KCEA2DGE100E	E	10		200V
C7048	KCEA1CGE470E	E	47		16V
C7061	KCEA1CN100UE	E	10		16V
C7062	ECFW1E104ZF5	C	0.1	Z	25V
C7063	ECUX1H681KBN	C	680p	K	50V
C7064	ECUX1H680JCG	C	68p	J	50V
C7065	ECKW1H331KB	C	330p	K	50V
C7066	ECUX1H103ZFG	C	0.01	Z	50V
C7067	KCEA1CU470E	E	47		16V
C7101	KCEA1CN220UE	E	22		16V
C7102	KCEA1CN220UE	E	22		16V
C7103	ECUX1H680JCG	C	68p	J	50V
C7105	ECUX1H104ZFX	C	0.1	Z	50V
C7106	ECUX1H103ZFG	C	0.01	Z	50V
C7121	KCEA0JU101E	E	100		6.3V
C7122	ECUX1H103ZFG	C	0.01	Z	50V
C7123	KCEA1HU2R2E	E	2.2		50V
C7124	ECUX1H103ZFG	C	0.01	Z	50V
C7125	ECUX1H103ZFG	C	0.01	Z	50V
C7126	ECUX1H103ZFG	C	0.01	Z	50V
C7128	KCEA1CU470E	E	47		16V

X-Board

Ref. No.	Part No.	Description
	RESISTORS	
R6101	ERJ6GEYJ472	C 4.7k J 1/10W
R6102	ERJ6GEYJ472	C 4.7k J 1/10W
R6103	ERJ6GEYJ472	C 4.7k J 1/10W
R6104	ERJ6GEYJ472	C 4.7k J 1/10W
R6105	ERJ6GEYJ472	C 4.7k J 1/10W
R6106	ERJ6GEYJ472	C 4.7k J 1/10W
R6107	ERJ6GEYJ472	C 4.7k J 1/10W
R6108	ERJ6GEYJ472	C 4.7k J 1/10W
R6109	ERJ6GEYJ472	C 4.7k J 1/10W
R6110	ERJ6GEYJ472	C 4.7k J 1/10W
R6111	ERJ6GEYJ101	C 100 J 1/10W
R6112	ERJ6GEYJ101	C 100 J 1/10W
R6113	ERJ6GEYJ101	C 100 J 1/10W
R6114	ERJ6GEYJ101	C 100 J 1/10W
R6115	ERJ6GEYJ101	C 100 J 1/10W
R6116	ERJ6GEYJ101	C 100 J 1/10W
R6117	ERJ6GEYJ101	C 100 J 1/10W
R6118	ERJ6GEYJ101	C 100 J 1/10W
R6119	ERJ6GEYJ681	C 680 J 1/10W
R6120	ERJ6GEYJ101	C 100 J 1/10W
R6121	ERJ6GEYJ103	C 10k J 1/10W
R6122	ERJ6GEYJ101	C 100 J 1/10W
R6123	ERJ6GEYJ101	C 100 J 1/10W
R6124	ERJ6GEYJ101	C 100 J 1/10W
R6125	ERJ6GEYJ101	C 100 J 1/10W
R6127	ERJ6GEYJ101	C 100 J 1/10W
R6128	ERJ6GEYJ104	C 100k J 1/10W
R6129	ERJ6GEYJ104	C 100k J 1/10W
R6134	ERJ6GEYJ101	C 100 J 1/10W
R6135	ERJ6GEYJ101	C 100 J 1/10W
R6136	ERJ6GEYJ101	C 100 J 1/10W
R6137	ERJ6GEYJ101	C 100 J 1/10W
R6138	ERJ6GEYJ101	C 100 J 1/10W
R6139	ERJ6GEYJ101	C 100 J 1/10W
R6140	ERJ6GEYJ101	C 100 J 1/10W
R6141	ERJ6GEYJ101	C 100 J 1/10W
R6142	ERJ6GEYJ101	C 100 J 1/10W
R6143	ERJ6GEYJ101	C 100 J 1/10W
R6144	ERJ6GEYJ101	C 100 J 1/10W
R6145	ERJ6GEYJ101	C 100 J 1/10W
R6146	ERJ6GEYJ101	C 100 J 1/10W
R6147	ERJ6GEYJ101	C 100 J 1/10W
R6148	ERJ6GEYJ101	C 100 J 1/10W
R6149	ERJ6GEYJ472	C 4.7k J 1/10W
R6150	ERJ6GEYJ101	C 100 J 1/10W
R6151	ERJ6GEYJ101	C 100 J 1/10W
R6152	ERJ6GEYJ101	C 100 J 1/10W
R6153	ERJ6GEYJ472	C 4.7k J 1/10W
R6154	ERJ6GEYJ472	C 4.7k J 1/10W
R6155	ERJ6GEYJ472	C 4.7k J 1/10W
R6156	ERJ6GEYJ472	C 4.7k J 1/10W

Ref. No.	Part No.	Description
R6157	ERJ6GEYJ101	C 100 J 1/10W
R6158	ERJ6GEYJ101	C 100 J 1/10W
R6159	ERJ6GEYJ101	C 100 J 1/10W
R6160	ERJ6GEYJ101	C 100 J 1/10W
R6161	ERJ6GEYJ101	C 100 J 1/10W
R6162	ERJ6GEYJ102	C 1k J 1/10W
R6163	ERJ6GEYJ102	C 1k J 1/10W
R6164	ERJ6GEYJ473	C 47k J 1/10W
R6165	ERJ6GEYJ473	C 47k J 1/10W
R6166	ERJ6GEYJ473	C 47k J 1/10W
R6167	ERJ6GEYJ473	C 47k J 1/10W
R6168	ERJ6GEYJ472	C 4.7k J 1/10W
R6170	ERJ6GEYJ101	C 100 J 1/10W
R6171	ERJ6GEYJ101	C 100 J 1/10W
R6172	ERJ6GEYJ473	C 47k J 1/10W
R6174	ERJ6GEYJ101	C 100 J 1/10W
R6175	ERJ6GEYJ222	C 2.2k J 1/10W
R6176	ERJ6GEYJ472	C 4.7k J 1/10W
R6177	ERJ6GEYJ472	C 4.7k J 1/10W
R6188	ERJ6GEYJ103	C 10k J 1/10W
R6189	ERJ6GEYJ103	C 10k J 1/10W
R6190	ERJ6GEYJ472	C 4.7k J 1/10W
R6192	ERJ6GEYJ103	C 10k J 1/10W
R6193	ERJ6GEYJ103	C 10k J 1/10W
R6194	ERJ6GEYJ103	C 10k J 1/10W
R6195	ERJ6GEYJ103	C 10k J 1/10W
R6196	ERJ6GEYJ472	C 4.7k J 1/10W
R6197	ERJ6GEYJ101	C 100 J 1/10W
R6198	ERJ6GEYJ101	C 100 J 1/10W
R6199	ERJ6GEYJ101	C 100 J 1/10W
R6201	ERJ6GEYJ101	C 100 J 1/10W
R6202	ERJ6GEYJ101	C 100 J 1/10W
R6203	ERJ6GEYJ101	C 100 J 1/10W
R6204	ERJ6GEYJ101	C 100 J 1/10W
R6206	ERJ6GEYJ102	C 1k J 1/10W
R6207	ERJ6GEYJ122	C 1.2k J 1/10W
R6210	ERJ6GEYJ101	C 100 J 1/10W
R6211	ERJ6GEYJ101	C 100 J 1/10W
R6212	ERJ6GEYJ101	C 100 J 1/10W
R6213	ERJ6GEYJ101	C 100 J 1/10W
R6215	ERJ6GEYJ102	C 1k J 1/10W
R6217	ERJ6GEYJ105	C 1M J 1/10W
R6219	ERJ6GEYJ152	C 1.5k J 1/10W
R6220	ERJ6GEYJ102	C 1k J 1/10W
R6223	ERJ6GEYJ122	C 1.2k J 1/10W
R6224	ERJ6GEYJ560	C 56 J 1/10W
R6225	ERJ6GEYJ394	C 390k J 1/10W
R6226	ERJ6GEYJ560	C 56 J 1/10W
R6227	ERJ6GEYJ394	C 390k J 1/10W
R6228	ERJ6GEYJ561	C 560 J 1/10W
R6229	ERJ6GEYJ122	C 1.2k J 1/10W
R6230	ERJ6GEYJ682	C 6.8k J 1/10W

Ref. No.	Part No.	Description			
R6231	ERJ6GEY0R00	C	0		1/10W
R6232	ERJ6GEYJ222	C	2.2k	J	1/10W
R6233	ERJ6GEYJ272	C	2.7k	J	1/10W
R6234	ERJ6GEYJ560	C	56	J	1/10W
R6235	ERJ6GEYJ473	C	47k	J	1/10W
R6236	ERJ6GEY0R00	C	0		1/10W
R6237	ERJ6GEYJ103	C	10k	J	1/10W
R6238	ERJ6GEYJ222	C	2.2k	J	1/10W
R6242	ERJ6GEYJ101	C	100	J	1/10W
R6243	ERJ6GEYJ122	C	1.2k	J	1/10W
R6245	ERJ6GEYJ224	C	220k	J	1/10W
R6246	ERJ6GEYJ101	C	100	J	1/10W
R6247	ERJ6GEYJ101	C	100	J	1/10W
R6248	ERJ6GEYJ101	C	100	J	1/10W
R6249	ERJ6GEYJ101	C	100	J	1/10W
R6250	ERJ6GEYJ101	C	100	J	1/10W
R6251	ERJ6GEYJ101	C	100	J	1/10W
R6252	ERJ6GEYJ101	C	100	J	1/10W
R6253	ERJ6GEYJ101	C	100	J	1/10W
R6254	ERJ6GEYJ101	C	100	J	1/10W
R6255	ERJ6GEYJ101	C	100	J	1/10W
R6256	ERJ6GEYJ101	C	100	J	1/10W
R6257	ERJ6GEYJ472	C	4.7k	J	1/10W
R6258	ERJ6GEYJ472	C	4.7k	J	1/10W
R6259	ERJ6GEYJ104	C	100k	J	1/10W
R6260	ERJ6GEYJ101	C	100	J	1/10W
R6261	ERJ6GEYJ101	C	100	J	1/10W
R6262	ERJ6GEYJ101	C	100	J	1/10W
R6263	ERJ6GEYJ560	C	56	J	1/10W
R6264	ERJ6GEYJ473	C	47k	J	1/10W
R6266	ERJ6GEY0R00	C	0		1/10W
R6267	ERJ6GEYJ273	C	27k	J	1/10W
R6272	ERJ6GEYJ471	C	470	J	1/10W
R6274	ERJ6GEYJ101	C	100	J	1/10W
R6301	ERJ6ENF1471	C	1.47k	F	1/10W
R6302	ERJ6ENF3011	C	3.01k	F	1/10W
R6303	ERJ6ENF6041	C	6.04k	F	1/10W
R6304	ERJ6ENF1212	C	12.1k	F	1/10W
R6305	ERJ6ENF2432	C	24.3k	F	1/10W
R6306	ERJ6ENF4872	C	48.7k	F	1/10W
R6307	ERJ6ENF9532	C	95.3k	F	1/10W
R6308	ERJ6ENF6191	C	6.19k	F	1/10W
R6309	ERJ6ENF1242	C	12.4k	F	1/10W
R6310	ERJ6ENF2492	C	24.9k	F	1/10W
R6311	ERJ6ENF4992	C	49.9k	F	1/10W
R6312	ERJ6ENF1003	C	100k	F	1/10W
R6313	ERJ6ENF2003	C	200k	F	1/10W
R6314	ERJ6ENF3923	C	392k	F	1/10W
R6315	ERJ6GEYJ201	C	200	J	1/10W
R6316	ERJ6GEYJ103	C	10k	J	1/10W
R6317	ERJ6GEYJ103	C	10k	J	1/10W
R6401	ERJ6ENF1471	C	1.47k	F	1/10W

Ref. No.	Part No.	Description			
R6402	ERJ6ENF3011	C	3.01k	F	1/10W
R6403	ERJ6ENF6041	C	6.04k	F	1/10W
R6404	ERJ6ENF1212	C	12.1k	F	1/10W
R6405	ERJ6ENF2432	C	24.3k	F	1/10W
R6406	ERJ6ENF4872	C	48.7k	F	1/10W
R6407	ERJ6ENF9532	C	95.3k	F	1/10W
R6408	ERJ6GEYJ152	C	1.5k	J	1/10W
R6409	ERJ6GEYJ103	C	10k	J	1/10W
R6410	ERJ6GEYJ822	C	8.2k	J	1/10W
R6412	ERJ6GEYJ222	C	2.2k	J	1/10W
R6416	ERJ6GEYJ562	C	5.6k	J	1/10W
R6418	ERJ6GEYJ562	C	5.6k	J	1/10W
R6419	ERJ6GEYJ562	C	5.6k	J	1/10W
R6420	ERJ6ENF1471	C	1.47k	F	1/10W
R6421	ERJ6ENF3011	C	3.01k	F	1/10W
R6422	ERJ6ENF6041	C	6.04k	F	1/10W
R6423	ERJ6ENF1212	C	12.1k	F	1/10W
R6424	ERJ6ENF2432	C	24.3k	F	1/10W
R6425	ERJ6ENF4872	C	48.7k	F	1/10W
R6426	ERJ6ENF9532	C	95.3k	F	1/10W
R6427	ERJ6GEYJ222	C	2.2k	J	1/10W
R6501	ERJ6ENF1471	C	1.47k	F	1/10W
R6502	ERJ6ENF3011	C	3.01k	F	1/10W
R6503	ERJ6ENF6041	C	6.04k	F	1/10W
R6504	ERJ6ENF1212	C	12.1k	F	1/10W
R6505	ERJ6ENF2432	C	24.3k	F	1/10W
R6506	ERJ6ENF4872	C	48.7k	F	1/10W
R6507	ERJ6ENF9532	C	95.3k	F	1/10W
R6512	ERJ6ENF1001	C	1.00k	F	1/10W
R6513	ERJ6GEYJ272	C	2.7k	J	1/10W
R6515	ERJ6GEYJ682	C	6.8k	J	1/10W
R6516	ERJ6GEYJ334	C	330k	J	1/10W
R6517	ERJ6GEYJ182	C	1.8k	J	1/10W
R6518	ERJ6GEYJ682	C	6.8k	J	1/10W
R6519	ERJ6GEYJ682	C	6.8k	J	1/10W
R6520	ERJ6GEYJ103	C	10k	J	1/10W
R6521	ERJ6GEYJ562	C	5.6k	J	1/10W
R6522	ERJ6GEYJ103	C	10k	J	1/10W
R6523	ERJ6GEYJ183	C	18k	J	1/10W
R6524	ERJ6GEYJ103	C	10k	J	1/10W
R6525	ERJ6GEYJ222	C	2.2k	J	1/10W
R6526	ERJ6GEYJ332	C	3.3k	J	1/10W
R6527	ERJ6ENF3012	C	30.1k	F	1/10W
R6528	ERJ6GEYJ332	C	3.3k	J	1/10W
R6529	ERJ6ENF3012	C	30.1k	F	1/10W
R6530	ERJ6GEYJ332	C	3.3k	J	1/10W
R6531	ERJ6GEYJ473	C	47k	J	1/10W
R6532	ERJ6GEYJ562	C	5.6k	J	1/10W
R6533	ERJ6GEYJ472	C	4.7k	J	1/10W
R6541	ERJ6GEYJ102	C	1k	J	1/10W
R6542	ERJ6GEYJ472	C	4.7k	J	1/10W
R6543	ERJ6GEYJ103	C	10k	J	1/10W

Ref. No.	Part No.	Description			
C7131	ECUX1H103ZFG	C	0.01	Z	50V
C7132	ECFW1H104ZF5	C	0.1	Z	50V
C7151	ECCW1H390JC	C	39p	J	50V
C7153	ECQB1H102JFW	P	1000p	J	50V
C7154	ECCW2H470JC5	C	47p	J	500V
C7157	KCEA1CGE470E	E	47		16V
C7158	ECQB1H102JFW	P	1000p	J	50V
C7159	ECQE2103JFW	MP	0.01	J	250V
C7160	KCEA2AGE2R2E	E	2.2		100V
C7161	KCEA2AGE2R2E	E	2.2		100V
C7162	KCEA2DGE010E	E	1		200V
C7163	ECUX1H103ZFG	C	0.01	Z	50V
C7164	ECUX1H103ZFG	C	0.01	Z	50V
C7165	ECKW2H103ZU	C	0.01	Z	500V
C7166	KCEA2DGE2R2E	E	2.2		200V
C7171	ECUX1H103ZFG	C	0.01	Z	50V
C7175	PUCF9270151	C	1000p	K	250V
C7176	PUCF9270151	C	1000p	K	250V
C7201	KCEA1CN220UE	E	22		16V
C7202	KCEA1CN220UE	E	22		16V
C7203	ECUX1H680JCG	C	68p	J	50V
C7205	ECUX1H104ZFX	C	0.1	Z	50V
C7206	ECUX1H103ZFG	C	0.01	Z	50V
C7221	KCEA0JU101E	E	100		6.3V
C7222	ECUX1H103ZFG	C	0.01	Z	50V
C7223	KCEA1HU2R2E	E	2.2		50V
C7224	ECUX1H103ZFG	C	0.01	Z	50V
C7225	ECUX1H103ZFG	C	0.01	Z	50V
C7226	ECUX1H103ZFG	C	0.01	Z	50V
C7228	KCEA1CU470E	E	47		16V
C7231	ECUX1H103ZFG	C	0.01	Z	50V
C7232	ECFW1H104ZF5	C	0.1	Z	50V
C7251	ECCW1H390JC	C	39p	J	50V
C7253	ECQB1H102JFW	P	1000p	J	50V
C7254	ECCW2H470JC5	C	47p	J	500V
C7257	KCEA1CGE470E	E	47		16V
C7258	ECQB1H102JFW	P	1000p	J	50V
C7259	ECQE2103JFW	MP	0.01	J	250V
C7260	KCEA2AGE2R2E	E	2.2		100V
C7261	KCEA2AGE2R2E	E	2.2		100V
C7262	KCEA2DGE010E	E	1		200V
C7263	ECUX1H103ZFG	C	0.01	Z	50V
C7264	ECUX1H103ZFG	C	0.01	Z	50V
C7265	ECKW2H103ZU	C	0.01	Z	500V
C7266	KCEA2DGE2R2E	E	2.2		200V
C7271	ECUX1H103ZFG	C	0.01	Z	50V
C7275	PUCF9270151	C	1000p	K	250V
C7276	PUCF9270151	C	1000p	K	250V
C7301	KCEA1CN220UE	E	22		16V
C7302	KCEA1CN220UE	E	22		16V
C7303	ECUX1H680JCG	C	68p	J	50V

Ref. No.	Part No.	Description			
C7305	ECUX1H104ZFX	C	0.1	Z	50V
C7306	ECUX1H103ZFG	C	0.01	Z	50V
C7321	KCEA0JU101E	E	100		6.3V
C7322	ECUX1H103ZFG	C	0.01	Z	50V
C7323	KCEA1HU2R2E	E	2.2		50V
C7324	ECUX1H103ZFG	C	0.01	Z	50V
C7325	ECUX1H103ZFG	C	0.01	Z	50V
C7326	ECUX1H103ZFG	C	0.01	Z	50V
C7328	KCEA1CU470E	E	47		16V
C7331	ECUX1H103ZFG	C	0.01	Z	50V
C7332	ECFW1H104ZF5	C	0.1	Z	50V
C7351	ECCW1H390JC	C	39p	J	50V
C7353	ECQB1H102JFW	P	1000p	J	50V
C7354	ECCW2H470JC5	C	47p	J	500V
C7357	KCEA1CGE470E	E	47		16V
C7358	ECQB1H102JFW	P	1000p	J	50V
C7359	ECQE2103JFW	MP	0.01	J	250V
C7360	KCEA2AGE2R2E	E	2.2		100V
C7361	KCEA2AGE2R2E	E	2.2		100V
C7362	KCEA2DGE010E	E	1		200V
C7363	ECUX1H103ZFG	C	0.01	Z	50V
C7364	ECUX1H103ZFG	C	0.01	Z	50V
C7365	ECKW2H103ZU	C	0.01	Z	500V
C7366	KCEA2DGE2R2E	E	2.2		200V
C7371	ECUX1H103ZFG	C	0.01	Z	50V
C7375	PUCF9270151	C	1000p	K	250V
C7376	PUCF9270151	C	1000p	K	250V
DIODES					
D7001	RD5.6MB2	Zener Diode (Vz=5.6V)			
D7002	RD5.6MB2	Zener Diode (Vz=5.6V)			
D7003	RD5.6MB2	Zener Diode (Vz=5.6V)			
D7004	MA152K	Diode			
D7005	RD5.6MB2	Zener Diode (Vz=5.6V)			
D7006	MA152K	Diode			
D7031	MA152WK	Diode			
D7034	RD3.3ESAB2	Zener Diode (Vz=3.3V)			
D7042	MA165	Diode			
D7061	MA165	Diode			
D7062	RD5.1ESAB2	Zener Diode (Vz=5.1V)			
D7101	MA157A	Diode			
D7102	MA157A	Diode			
D7131	MA152K	Diode			
D7132	MA152K	Diode			
D7134	MA157A	Diode			
D7151	MA157A	Diode			
D7153	1SS83	Diode			
D7154	1SS83	Diode			
D7201	MA157A	Diode			
D7202	MA157A	Diode			
D7231	MA152K	Diode			
D7232	MA152K	Diode			
D7234	MA157A	Diode			

Ref. No.	Part No.	Description
D7251	MA157A	Diode
D7253	1SS83	Diode
D7254	1SS83	Diode
D7301	MA157A	Diode
D7302	MA157A	Diode
D7331	MA152K	Diode
D7332	MA152K	Diode
D7334	MA157A	Diode
D7351	MA157A	Diode
D7353	1SS83	Diode
D7354	1SS83	Diode
INTEGRATED CIRCUITS		
IC7001	M62358P	IC (D/A Converter)
IC7002	HA17431P	Shunt Regulator
IC7004	TC74HCT04AP	IC
IC7006	M52327SP	IC (Video Pre-Amp.)
IC7008	NJM78M24FA	+24V Regulator
IC7009	NJM324D	IC (OP. Amp.)
IC7010	HA17431P	Shunt Regulator
IC7101	TC74HC4066AP	IC (Analog Switch)
IC7201	TC74HC4066AP	IC (Analog Switch)
IC7301	TC74HC4066AP	IC (Analog Switch)
COILS		
L7021	LAL02NA101K	Inductor (100μH)
L7061	EXCELDR35C	Ferrite Bead
TRANSISTORS		
Q7001	KSA812	Transistor
Q7002	2SC3398	Transistor
Q7003	2SC1740S	Transistor
Q7025	2SC3395	Transistor
Q7026	2SC3395	Transistor
Q7027	2SC3395	Transistor
Q7031	2SC1740S	Transistor
Q7034	2SC1740S	Transistor
Q7041	2SB1548-P	Transistor
Q7061	KSC1623	Transistor
Q7062	2SC3398	Transistor
Q7101	2SA933S	Transistor
Q7131	KSA812	Transistor
Q7132	2SC1740S	Transistor
Q7134	2SC3504E	Transistor
Q7135	2SA1031C	Transistor
Q7136	2SC1740S	Transistor
Q7137	2SC1740S	Transistor
Q7138	2SA933S	Transistor
Q7151	2SC3955E	Tr (Video Amp.)
Q7152	2SA1540E	Tr (Video Amp.)
Q7153	2SC3789E	Tr (Buffer)
Q7154	2SA1479E	Tr (Buffer)
Q7156	2SC3941-Q/R	Tr (Cut-off)
Q7157	2SC3941-Q/R	Tr (Cut-off)

Ref. No.	Part No.	Description
Q7159	KSC1623	Transistor
Q7201	2SA933S	Transistor
Q7231	KSA812	Transistor
Q7232	2SC1740S	Transistor
Q7234	2SC3504E	Transistor
Q7235	2SA1031C	Transistor
Q7236	2SC1740S	Transistor
Q7237	2SC1740S	Transistor
Q7238	2SA933S	Transistor
Q7251	2SC3955E	Tr (Video Amp.)
Q7252	2SA1540E	Tr (Video Amp.)
Q7253	2SC3789E	Tr (Buffer)
Q7254	2SA1479E	Tr (Buffer)
Q7256	2SC3941-Q/R	Tr (Cut-off)
Q7257	2SC3941-Q/R	Tr (Cut-off)
Q7259	KSC1623	Transistor
Q7301	2SA933S	Transistor
Q7331	KSA812	Transistor
Q7332	2SC1740S	Transistor
Q7334	2SC3504E	Transistor
Q7335	2SA1031C	Transistor
Q7336	2SC1740S	Transistor
Q7337	2SC1740S	Transistor
Q7338	2SA933S	Transistor
Q7351	2SC3955E	Tr (Video Amp.)
Q7352	2SA1540E	Tr (Video Amp.)
Q7353	2SC3789E	Tr (Buffer)
Q7354	2SA1479E	Tr (Buffer)
Q7356	2SC3941-Q/R	Tr (Cut-off)
Q7357	2SC3941-Q/R	Tr (Cut-off)
Q7359	KSC1623	Transistor
OTHERS		
CO-06N	053A-9106	6P Angle Connector (Black)
CO-49N	B6B-EH	6P Connector
CO-50N	053A-9105	5P Angle Connector (Black)
CO-51N	053A-9108	8P Angle Connector (Black)
CO-52N	053A-9012	12P Angle Connector
CO-53N	B10B-EH	10P Connector
CO-54N	S9B-EH	9P Angle Connector
CO-55N	053A-9103	3P Angle Connector (Black)
CO-56N	B3B-EH	3P Connector
CO-57N	B3B-EH	3P Connector
CO-58N	B3B-EH	3P Connector
N7001	TCBS-8-19	Spacer
(OR)	KGTS-8K (V-0)	Spacer
	PAUX37802	Ground Lug
	PUKR9270132	Heat Sink/Q7151-Q7154, Q7251-Q7254, Q7351-Q7354
	XYN3+J10FX	Screw/Q7151-Q7154, Q7251-Q7254, Q7351-Q7354

Ref. No.	Part No.	Description			
R6544	ERJ6GEYJ103	C	10k	J	1/10W
R6545	ERJ6GEYJ822	C	8.2k	J	1/10W
R6546	ERJ6GEYJ153	C	15k	J	1/10W
R6547	ERJ6GEYJ562	C	5.6k	J	1/10W
R6548	ERJ6GEYJ102	C	1k	J	1/10W
R6600	ERJ6GEYJ102	C	1k	J	1/10W
R6601	ERJ6GEYJ472	C	4.7k	J	1/10W
R6602	ERJ6GEYJ472	C	4.7k	J	1/10W
R6603	ERJ6GEYJ472	C	4.7k	J	1/10W
R6604	ERJ6GEYJ472	C	4.7k	J	1/10W
R6605	ERJ6GEYJ472	C	4.7k	J	1/10W
R6606	ERJ6GEYJ472	C	4.7k	J	1/10W
R6607	ERJ6GEYJ472	C	4.7k	J	1/10W
R6608	ERJ6GEYJ472	C	4.7k	J	1/10W
R6610	ERJ6GEYJ472	C	4.7k	J	1/10W
R6611	ERJ6ENF7682	C	76.8k	F	1/10W
R6612	ERJ6ENF3000	C	300	F	1/10W
R6613	ERJ6ENF7682	C	76.8k	F	1/10W
R6614	ERJ6ENF3000	C	300	F	1/10W
R6615	ERJ6GEYJ103	C	10k	J	1/10W
R6616	ERJ6ENF1002	C	10.0k	F	1/10W
R6617	ERJ6ENF1002	C	10.0k	F	1/10W
R6618	ERJ6GEYJ102	C	1k	J	1/10W
R6619	ERJ6GEYJ102	C	1k	J	1/10W
R6620	ERJ6GEYJ224	C	220k	J	1/10W
R6621	ERJ6ENF1202	C	12.0k	F	1/10W
R6622	ERJ6ENF7501	C	7.50k	F	1/10W
R6623	ERJ6GEYJ224	C	220k	J	1/10W
R6624	ERJ6ENF7501	C	7.50k	F	1/10W
R6625	ERJ6ENF1002	C	10.0k	F	1/10W
R6628	ERJ6GEYJ473	C	47k	J	1/10W
R6629	ERJ6GEYJ473	C	47k	J	1/10W
R6630	ERDS2TJ122	C	1.2k	J	1/4W
J6101	ERJ6GEY0R00	C	0		1/10W
CAPACITORS					
C6101	KCEA0JU221E	E	220		6.3V
C6102	ECUX1H103ZFG	C	0.01	Z	50V
C6104	ECUX1H104ZFX	C	0.1	Z	50V
C6106	KCEA1CU100E	E	10		16V
C6107	ECUX1H103ZFG	C	0.01	Z	50V
C6108	ECUX1H221JCG	C	220p	J	50V
C6109	ECUX1H221JCG	C	220p	J	50V
C6110	ECUX1H221JCG	C	220p	J	50V
C6111	ECUX1H221JCG	C	220p	J	50V
C6112	ECUX1H221JCG	C	220p	J	50V
C6113	ECUX1H221JCG	C	220p	J	50V
C6114	ECUX1H221JCG	C	220p	J	50V
C6115	ECUX1H221JCG	C	220p	J	50V
C6116	ECUX1H221JCG	C	220p	J	50V
C6117	ECUX1H221JCG	C	220p	J	50V
C6118	ECUX1H221JCG	C	220p	J	50V

Ref. No.	Part No.	Description			
C6119	ECUX1H221JCG	C	220p	J	50V
C6120	ECUX1H221JCG	C	220p	J	50V
C6121	ECUX1H221JCG	C	220p	J	50V
C6122	ECUX1H221JCG	C	220p	J	50V
C6123	ECUX1H221JCG	C	220p	J	50V
C6124	ECUX1H221JCG	C	220p	J	50V
C6125	ECUX1E104ZFX	C	0.1	Z	25V
C6126	KCEA1CU330E	E	33		16V
C6127	ECUX1H103ZFG	C	0.01	Z	50V
C6128	KCEA1HU010E	E	1		50V
C6129	ECUX1H104ZFX	C	0.1	Z	50V
C6130	ECUX1H221JCG	C	220p	J	50V
C6131	ECUX1H221JCG	C	220p	J	50V
C6132	ECUX1H221JCG	C	220p	J	50V
C6133	ECUX1H221JCG	C	220p	J	50V
C6134	ECUX1H221JCG	C	220p	J	50V
C6135	ECUX1H221JCG	C	220p	J	50V
C6136	ECUX1H221JCG	C	220p	J	50V
C6137	ECUX1H221JCG	C	220p	J	50V
C6138	ECUX1H221JCG	C	220p	J	50V
C6139	ECUX1H221JCG	C	220p	J	50V
C6140	ECUX1H221JCG	C	220p	J	50V
C6141	ECUX1H103ZFG	C	0.01	Z	50V
C6142	ECUX1H221JCG	C	220p	J	50V
C6143	ECUX1H221JCG	C	220p	J	50V
C6144	ECUX1H221JCG	C	220p	J	50V
C6145	ECUX1H221JCG	C	220p	J	50V
C6146	ECUX1H103ZFG	C	0.01	Z	50V
C6147	ECUX1E104ZFX	C	0.1	Z	25V
C6148	KCEA1CU100E	E	10		16V
C6149	ECUX1E104ZFX	C	0.1	Z	25V
C6150	ECUX1E104ZFX	C	0.1	Z	25V
C6151	ECUX1E104ZFX	C	0.1	Z	25V
C6152	ECUX1E104ZFX	C	0.1	Z	25V
C6153	ECUX1H180JCN	C	18p	J	50V
C6154	ECUX1H180JCN	C	18p	J	50V
C6204	ECUX1H561JCX	C	560p	J	50V
C6205	KCEA1CU330E	E	33		16V
C6206	ECUX1H103ZFG	C	0.01	Z	50V
C6207	ECUX1H180JCN	C	18p	J	50V
C6208	ECUX1H180JCN	C	18p	J	50V
C6209	KCEA1CU100E	E	10		16V
C6210	ECUX1H182KBN	C	1800p	K	50V
C6211	ECUX1H561JCX	C	560p	J	50V
C6212	ECUX1H472KBG	C	4700p	K	50V
C6213	ECUX1H392KBN	C	3900p	K	50V
C6214	KCEA1HU010E	E	1		50V
C6215	KCEA1HU4R7E	E	4.7		50V
C6216	ECUX1H472KBG	C	4700p	K	50V
C6217	ECUX1H561JCX	C	560p	J	50V
C6218	KCEA1CU331E	E	330		16V
C6219	ECUX1H331JCG	C	330p	J	50V

Ref. No.	Part No.	Description			
C6220	ECUX1H221JCG	C	220p	J	50V
C6221	ECUX1H221JCG	C	220p	J	50V
C6223	ECUX1H101JCG	C	100p	J	50V
C6227	ECUX1E104ZFX	C	0.1	Z	25V
C6228	ECUX1E104ZFX	C	0.1	Z	25V
C6229	ECUX1H331JCG	C	330p	J	50V
C6301	KCEA1CU100E	E	10		16V
C6302	ECUX1E104ZFX	C	0.1	Z	25V
C6401	ECUX1E104ZFX	C	0.1	Z	25V
C6402	ECUX1H103ZFG	C	0.01	Z	50V
C6403	ECUX1H680JCG	C	68p	J	50V
C6407	KCEA1CU100E	E	10		16V
C6408	ECUX1H103ZFG	C	0.01	Z	50V
C6503	ECUX1E104ZFX	C	0.1	Z	25V
C6504	ECUX1E104ZFX	C	0.1	Z	25V
C6505	ECUX1H680JCG	C	68p	J	50V
C6506	KCEA1CU330E	E	33		16V
C6507	ECUX1H103ZFG	C	0.01	Z	50V
C6508	KCEA1CU100E	E	10		16V
C6509	ECUX1H182KBN	C	1800p	K	50V
C6510	KCEA1CU330E	E	33		16V
C6511	ECUX1H103ZFG	C	0.01	Z	50V
C6512	ECUX1H472KBG	C	4700p	K	50V
C6513	ECUX1E104ZFX	C	0.1	Z	25V
C6514	ECUX1E104ZFX	C	0.1	Z	25V
C6516	KCEA1CU100E	E	10		16V
C6517	ECUX1H103ZFG	C	0.01	Z	50V
C6519	KCEA1CU100E	E	10		16V
C6520	ECUX1H103ZFG	C	0.01	Z	50V
C6521	ECUX1H390JCG	C	39p	J	50V
C6522	ECUX1E104ZFX	C	0.1	Z	25V
C6523	ECUX1H101JCG	C	100p	J	50V
C6530	KCEA1HU4R7E	E	4.7		50V
DIODES					
D6101	RD5.6MB2	Zener Diode (Vz=5.6V)			
D6102	RD5.6MB2	Zener Diode (Vz=5.6V)			
D6103	RD5.6MB2	Zener Diode (Vz=5.6V)			
D6104	RD5.6MB2	Zener Diode (Vz=5.6V)			
D6105	RD5.6MB2	Zener Diode (Vz=5.6V)			
D6106	RD5.6MB2	Zener Diode (Vz=5.6V)			
D6107	RD5.6MB2	Zener Diode (Vz=5.6V)			
D6108	RD5.6MB2	Zener Diode (Vz=5.6V)			
D6109	RD5.6MB2	Zener Diode (Vz=5.6V)			
D6110	RD5.6MB2	Zener Diode (Vz=5.6V)			
D6111	MA151K	Diode			
D6112	RD5.6MB2	Zener Diode (Vz=5.6V)			
D6113	RD5.6MB2	Zener Diode (Vz=5.6V)			
D6114	RD5.6MB2	Zener Diode (Vz=5.6V)			
D6115	RD5.6MB2	Zener Diode (Vz=5.6V)			
D6116	RD5.6MB2	Zener Diode (Vz=5.6V)			
D6118	RD5.1MB3	Zener Diode (Vz=5.1V)			

Ref. No.	Part No.	Description
D6119	RD5.6MB2	Zener Diode (Vz=5.6V)
D6120	RD5.6MB2	Zener Diode (Vz=5.6V)
D6121	RD5.6MB2	Zener Diode (Vz=5.6V)
D6122	RD5.6MB2	Zener Diode (Vz=5.6V)
D6123	RD5.6MB2	Zener Diode (Vz=5.6V)
D6124	RD5.6MB2	Zener Diode (Vz=5.6V)
D6125	RD5.6MB2	Zener Diode (Vz=5.6V)
D6126	RD5.6MB2	Zener Diode (Vz=5.6V)
D6127	RD5.6MB2	Zener Diode (Vz=5.6V)
D6128	MA152WK	Diode
D6129	MA152WK	Diode
D6201	RD5.6MB2	Zener Diode (Vz=5.6V)
D6202	MA151K	Diode
D6203	RD5.6MB2	Zener Diode (Vz=5.6V)
D6204	RD5.6MB2	Zener Diode (Vz=5.6V)
D6205	MA151K	Diode
D6206	RD5.6MB2	Zener Diode (Vz=5.6V)
D6207	RD5.6MB2	Zener Diode (Vz=5.6V)
D6208	RD5.6MB2	Zener Diode (Vz=5.6V)
D6210	RD4.7MB2	Zener Diode (Vz=4.7V)
D6211	RD4.7MB2	Zener Diode (Vz=4.7V)
D6212	MA151K	Diode
D6213	MA151K	Diode
D6501	RD4.3MB1	Zener Diode (Vz=4.3V)
D6502	MA151K	Diode
D6503	MA151K	Diode
D6504	MA151K	Diode
D6510	MA165	Diode
INTEGRATED CIRCUITS		
IC6101	PUIC9270101	IC (Microprocessor)
IC6102	M62352FP	IC (D/A Converter)
IC6103	S29355ADP	IC (Memory)
IC6104	M51953AL	IC (Microprocessor Reset)
IC6105	NJM3403AM	IC (OP. Amp.)
IC6201	PUIC9270102	IC (Gate Array)
IC6202	NJU6402BM	IC (RS232C I/F)
IC6501	NJM4560M	IC (OP. Amp.)
COILS		
L6101	TLT221K991R	Peaking Coil (220μH)
L6201	TLT221K991R	Peaking Coil (220μH)
L6202	TLT221K991R	Peaking Coil (220μH)
TRANSISTORS		
Q6101	2SC3398	Transistor
Q6102	2SC3398	Transistor
Q6103	2SC3398	Transistor
Q6104	2SC3398	Transistor
Q6105	2SC3398	Transistor
Q6106	2SC3398	Transistor
Q6107	2SC3398	Transistor
Q6108	2SC3398	Transistor
Q6109	KSC1623	Transistor

Ref. No.	Part No.	Description
Q6110	KSA812	Transistor
Q6202	KSC1623	Transistor
Q6203	KSC1623	Transistor
Q6301	KSC1623	Transistor
Q6302	KSC1623	Transistor
Q6401	KSA812	Transistor
Q6402	KSC1623	Transistor
Q6403	KSC1623	Transistor
Q6404	KSC1623	Transistor
Q6407	KSA812	Transistor
Q6503	KSA812	Transistor
Q6504	KSC1623	Transistor
Q6505	KSC1623	Transistor
Q6506	KSC1623	Transistor
Q6507	KSC1623	Transistor
Q6508	KSA812	Transistor
Q6509	KSA812	Transistor
Q6510	KSC1623	Transistor
Q6511	KSC1623	Transistor
Q6512	2SC3398	Transistor
Q6514	KSA812	Transistor
Q6515	KSA812	Transistor
Q6516	KSC1623	Transistor
	OTHERS	
A-A	PUWE9270101	Lead
B-B	PUWE9270102	Lead
CO-01X	52419-1190	11P Coupler
CO-02X	52419-1290	12P Coupler
CO-03X	52419-1290	12P Coupler
CO-11X	051A-9006	6P Connector
CO-21X	051A-9109	9P Connector (Black)
CO-31X	051A-9110	10P Connector (Black)
CO-32X	051A-9112	12P Connector (Black)
CO-33X	051A-9104	4P Connector (Black)
CO-41X	051A-9106	6P Connector (Black)
CO-42X	051A-9107	7P Connector (Black)
CO-43X	051A-9007	7P Connector
CO-51X	051A-9108	8P Connector (Black)
CO-52X	051A-9012	12P Connector
CO-71X	051A-9103	3P Connector (Black)
CO-75X	051A-9003	3P Connector
CO6101	IC260803GS4	IC Socket/IC6103
X6101	AT-51-8MHz	Crystal Oscillator
X6201	PAVC30002	Crystal Oscillator
	KGTS-6K	Spacer

Abbreviation of Part Name and Description

1. Resistor

Example:

ERDS2TJ104 C 100K J 1/4W

TYPE ALLOWANCE

TYPE	ALLOWANCE
C : Carbon F : Fuse M : Metal Oxide Metal Film S : Solid W : Wire Wound	F : ±1% G : ±2% J : ±5% K : ±10% M : ±20%

2. Capacitor

Example:

ECKW1H103ZF C 0.01 Z 50V

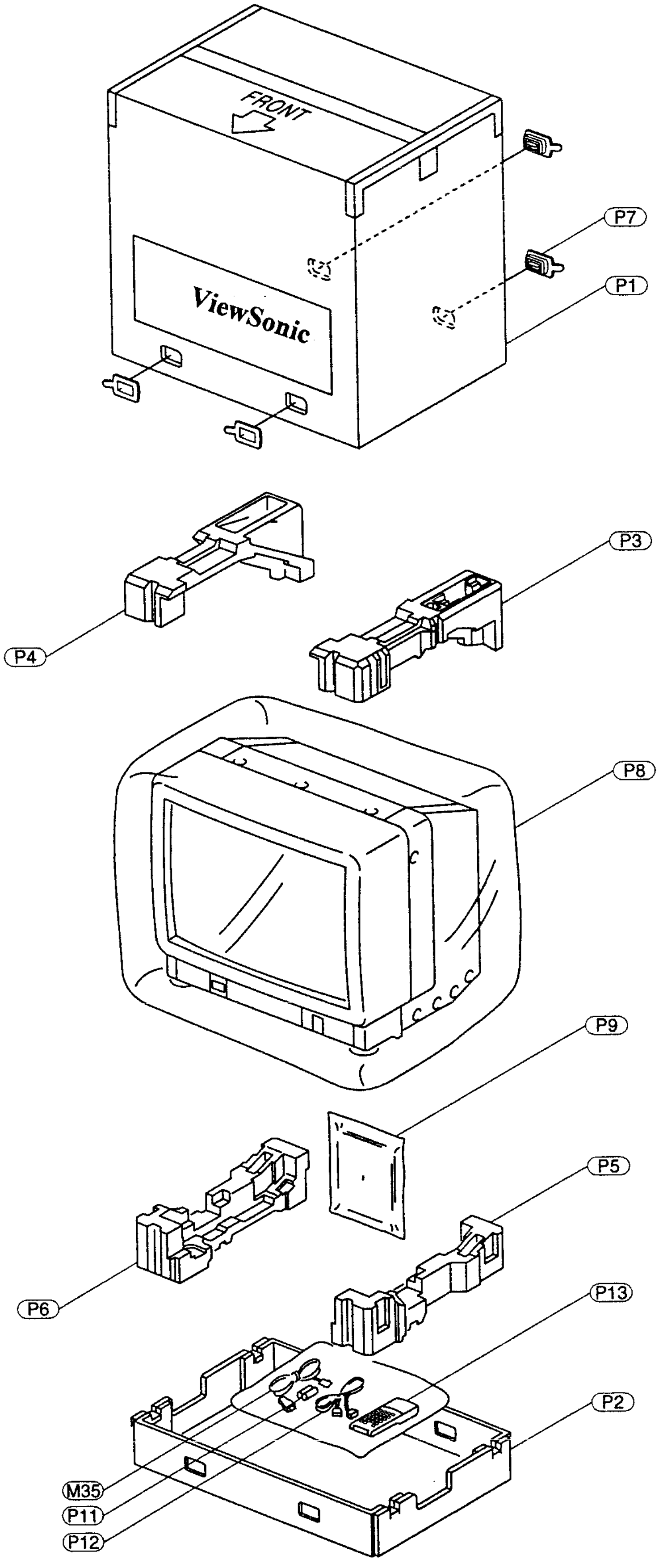
TYPE ALLOWANCE

TYPE	ALLOWANCE
C : Ceramic E : Electrolytic P : Polyester Polypropylene T : Tantalum	C : ±0.25pF D : ±0.5pF F : ±1pF J : ±5% K : ±10% L : ±15% M : ±20% P : +100%, −0% Z : +80%, −20%

cking Parts

ef. No.	Part No.	Description
1	PUPM00105	Packing Case (Upper)
2	PUPM00102	Packing Case (Bottom)
3	PUPM001G	Cushion (Upper-R)
4	PUPM002G	Cushion (Upper-L)
5	PUPM003G	Cushion (Bottom-R)
6	PUPM004G	Cushion (Bottom-L)
7	HP-601W-5	Joint
8	PUPM004H	Cover For Unit
9	PUWX0270198	Fan Bag
11	R6PBPA/2ST	Battery
12	PASX3222	Signal Cable
13	PUWX1270103	Remote Controller

acking Parts


FRONT
ViewSonic
P7
P1
P3
P4
P8
P9
P5
P6
P13
P2
M35
P11
P12

Service Manual

Supplement - 1

ViewSonic 29GA

Model No. 2964GA-1

Please file and use this supplement manual together with the service manual for Model No. **2964GA-1** ,

IMPORTANT

Subject ... This change has been introduced to improve reliability.

■ REPLACEMENT PARTS LIST

NOTE: Important Safety Notice.
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components,use only manufacturer's specified parts.

Interchangeability Code		See the Code column on the following parts number list.
Parts	Set Production	
A Original New	Early Late	Original or new parts may be used in early or late production sets. Use original parts until exhausted , then stock new parts.
B Original New	Early Late	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts where possible , then stock new parts.
C Original New	Early Late	New parts only may be used in early or late production sets. Stock new parts.
D Original New	Early Late	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.

E Addition	F Deletion	G Correction	H Change the number of parts per set

Page	Ref. No.	Part No.		Part Name and Description	Per Set	Remarks	Code	Figure
		Original	New					
51	M32	FBA09A12MO	FBA09A12MZ	Fan Motor	1		G	
52	B4	XSN3+W6	XTW3+6L	3 X 6 mm Screw	—		G	
61	R3245	————	ERDS2TJ123	C 12K J 1/4W	1		G	
77	—	————	NB-0313NO1	Sheet / X6101,X6201	2		E	

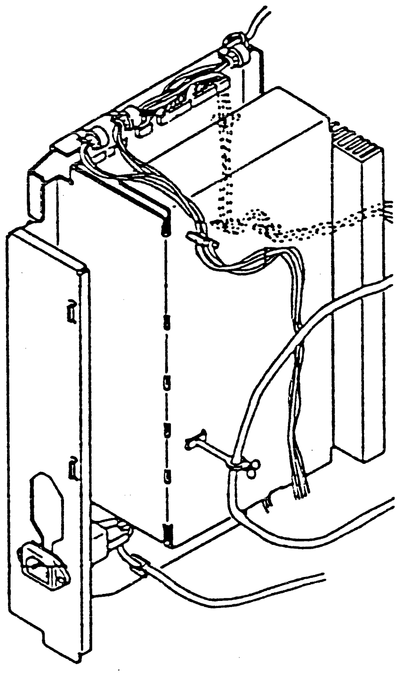
ViewSonic

Printed in Japa

■ MODIFICATION OF CLAMPING AND WIRING POSITIONS OF INTERNAL LEADS

(On page 28 of Original **29GA Service Manual**)

Original



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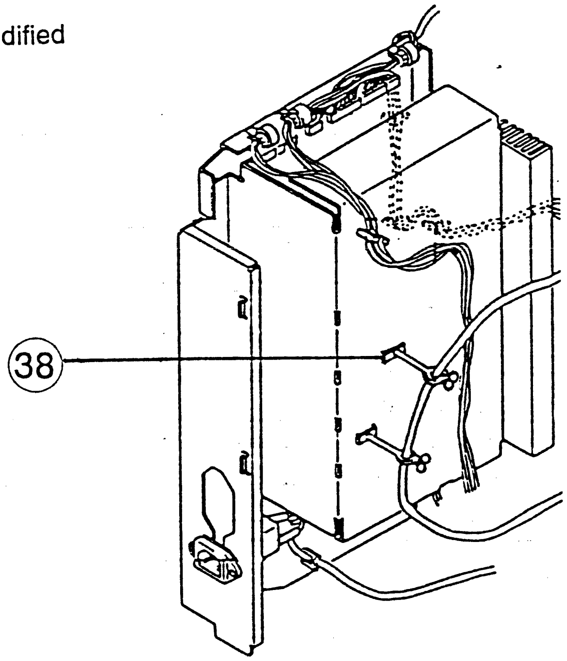
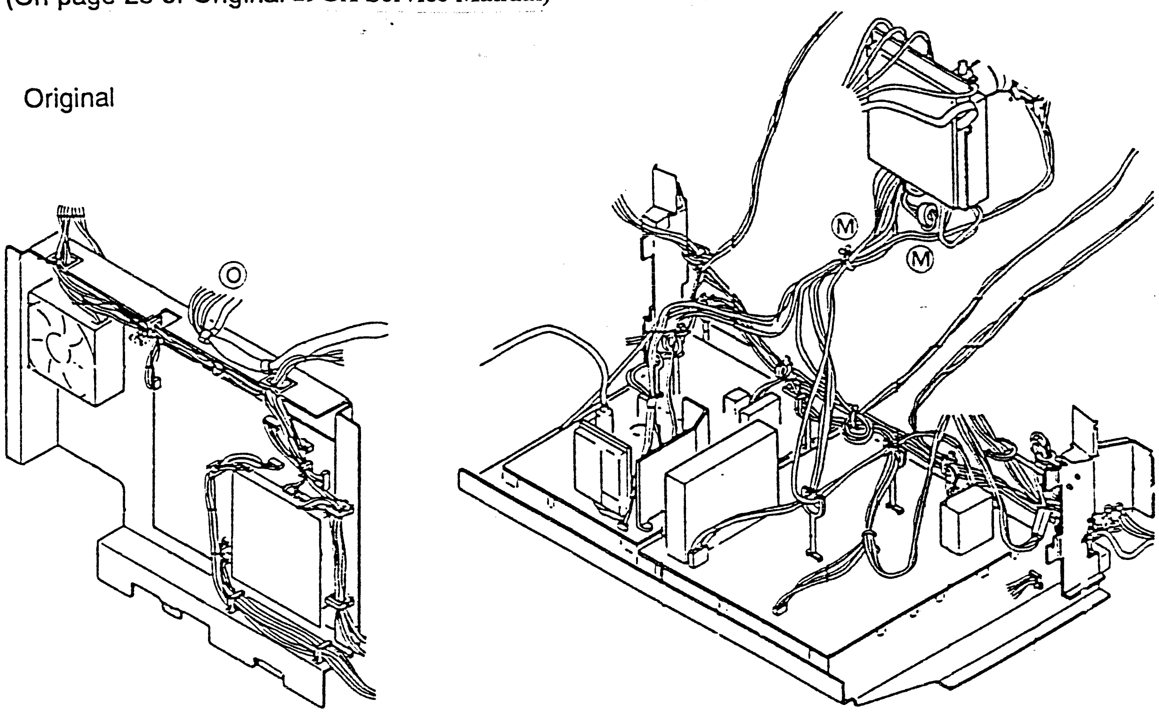


㊳	Anode lead from FBT

■ MODIFICATION OF CLAMPING AND WIRING POSITIONS OF INTERNAL LEADS

(On page 28 of Original **29GA Service Manual)**

Original



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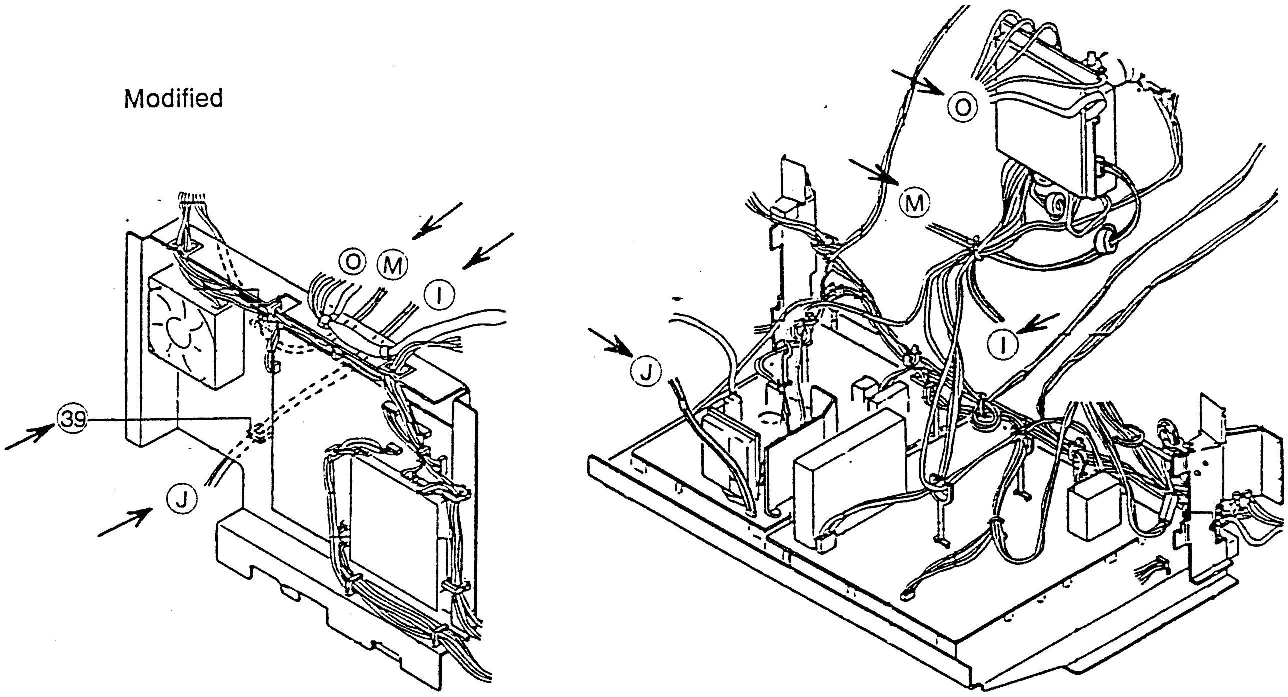
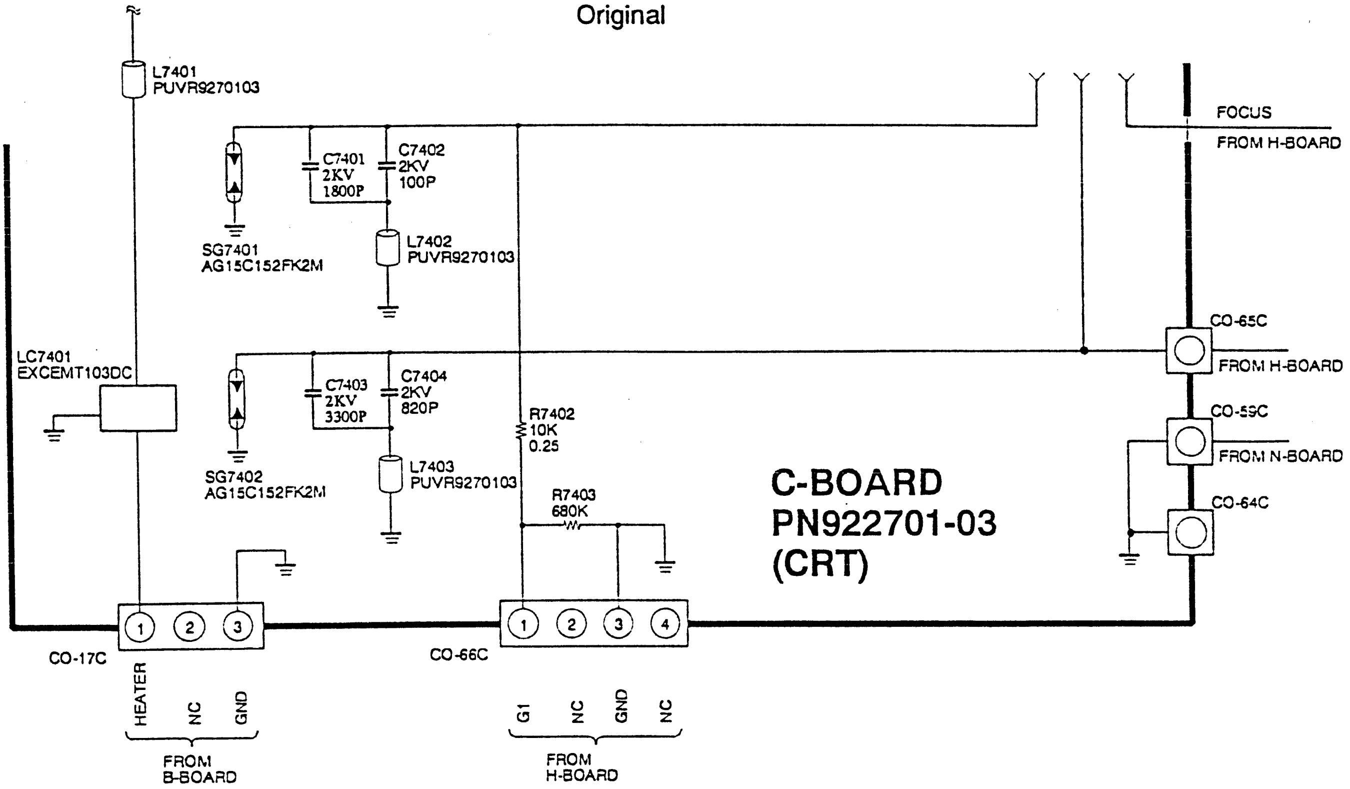


㊴	One cable : CO-66HC

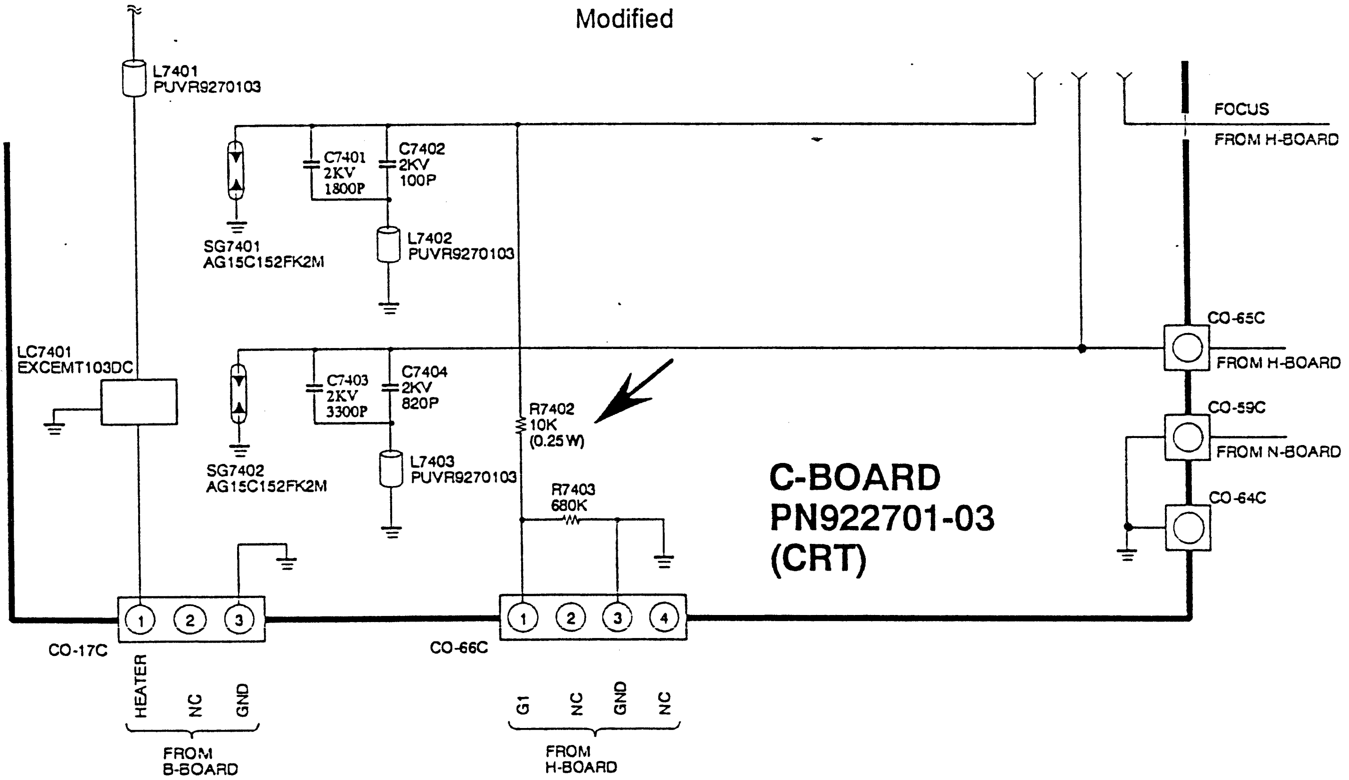
■ MODIFICATION OF SCHEMATIC DIAGRAM
(On page 43 of Original **29GA Service Manual**)

Original



L7401
PUVR9270103
C7401
2KV
1800P
C7402
2KV
100P
SG7401
AG15C152FK2M
L7402
PUVR9270103
FOCUS
FROM H-BOARD
CO-65C
FROM H-BOARD
LC7401
EXCEMT103DC
C7403
2KV
3300P
C7404
2KV
820P
R7402
10K
0.25
CO-59C
FROM N-BOARD
SG7402
AG15C152FK2M
L7403
PUVR9270103
R7403
680K
CO-64C
C-BOARD
PN922701-03
(CRT)
CO-17C
CO-66C
HEATER
NC
GND
FROM
B-BOARD
G1
NC
GND
NC
FROM
H-BOARD

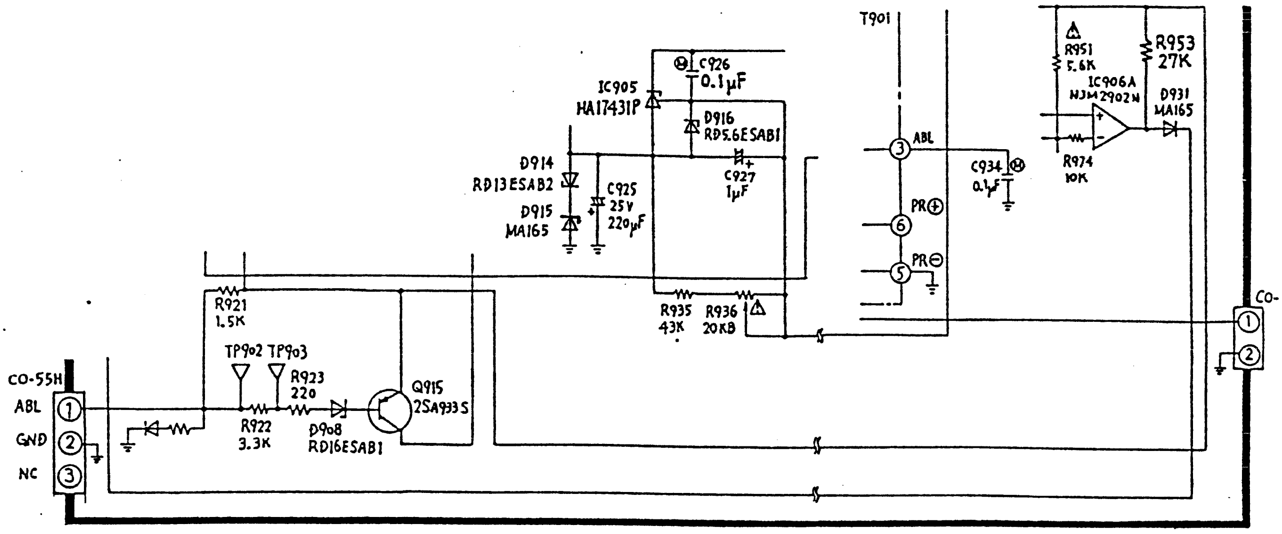
Modified



L7401
PUVR9270103
C7401
2KV
1800P
C7402
2KV
100P
SG7401
AG15C152FK2M
L7402
PUVR9270103
FOCUS
FROM H-BOARD
CO-65C
FROM H-BOARD
LC7401
EXCEMT103DC
C7403
2KV
3300P
C7404
2KV
820P
R7402
10K
(0.25W)
CO-59C
FROM N-BOARD
SG7402
AG15C152FK2M
L7403
PUVR9270103
R7403
680K
CO-64C
C-BOARD
PN922701-03
(CRT)
CO-17C
CO-66C
HEATER
NC
GND
FROM
B-BOARD
G1
NC
GND
NC
FROM
H-BOARD

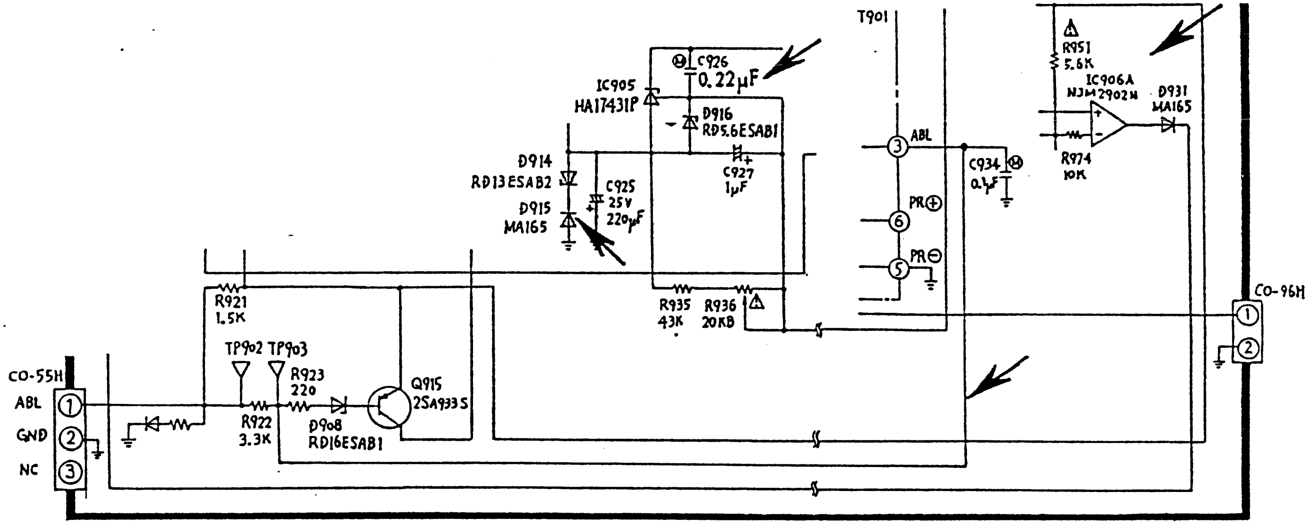
■ MODIFICATION OF SCHEMATIC DIAGRAM
(On page 44 of Original 29GA Service Manual)

Original



T901
C926
0.1μF
IC905
HA17431P
D916
RD5.6ESAB1
D914
RD13ESAB2
C927
1μF
C925
25V
220μF
D915
MA165
R951
5.6K
R953
27K
IC906A
NJM2902N
D931
MA165
R974
10K
ABL
C934
0.1μF
PR⊕
PR⊖
CO-96H
R921
1.5K
R935
43K
R936
20KB
TP902 TP903
R923
220
Q915
2SA933S
R922
3.3K
D908
RD16ESAB1
CO-55H
ABL
GND
NC

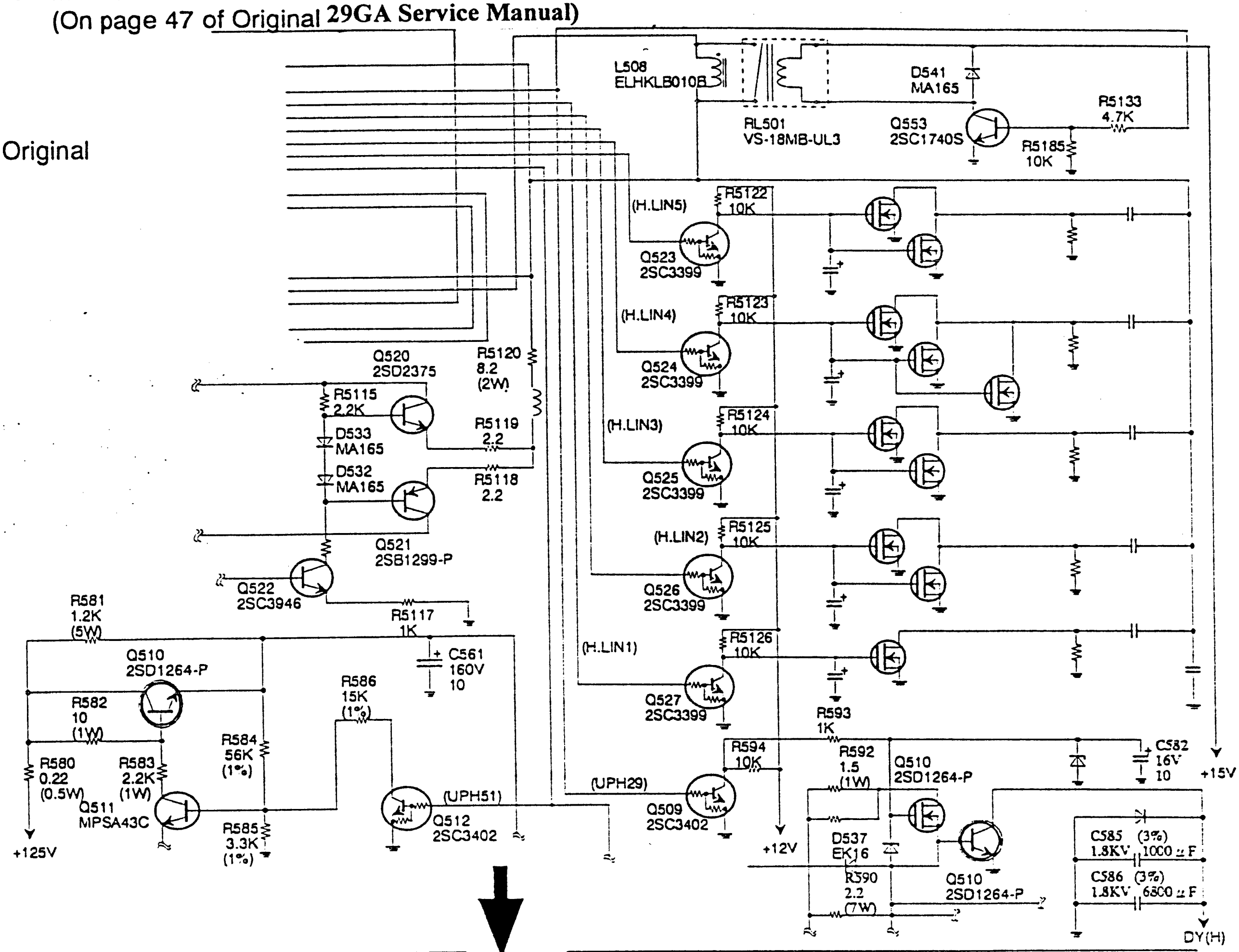
Modified



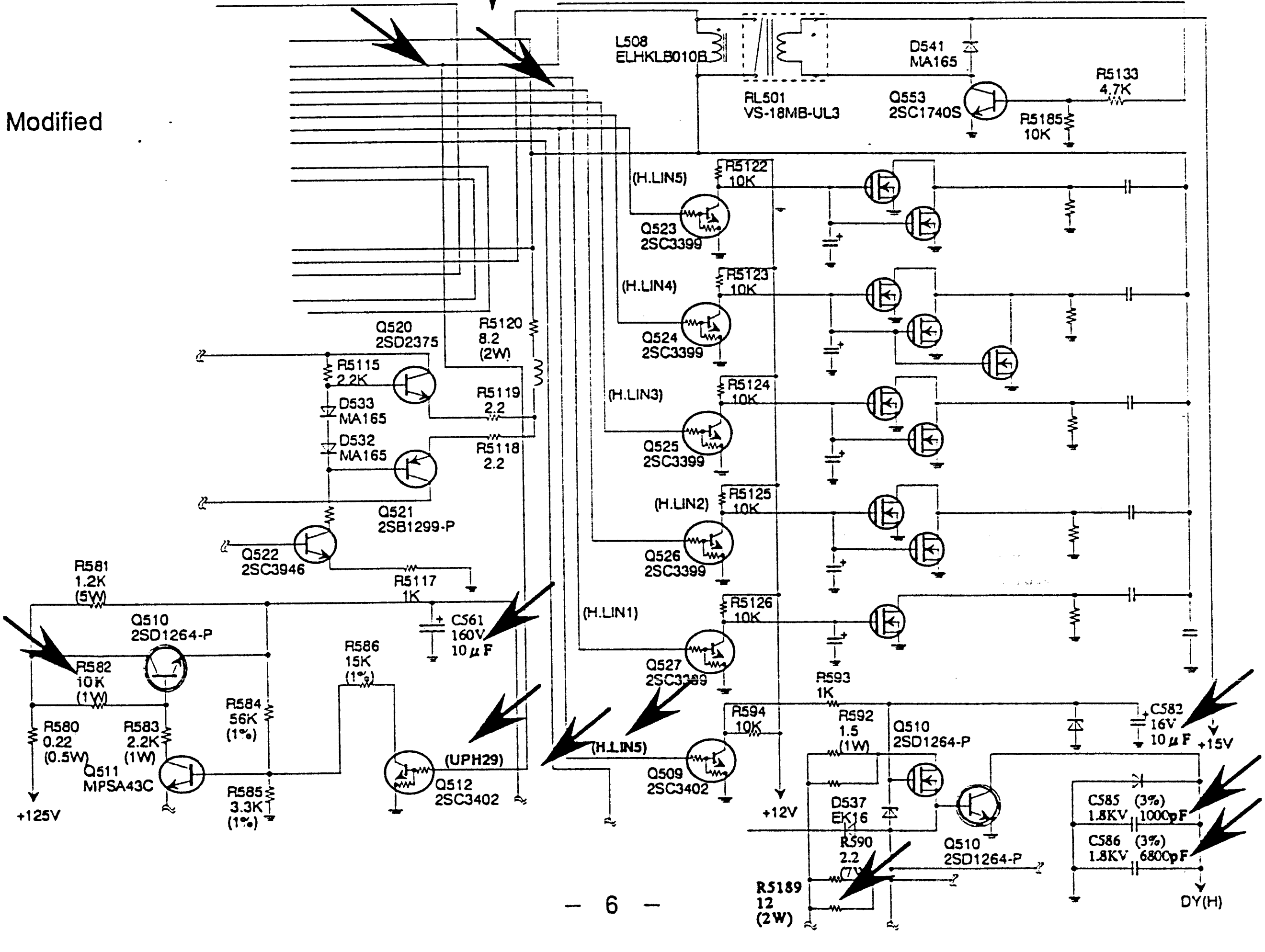
T901
C926
0.22μF
IC905
HA17431P
D916
RD5.6ESAB1
D914
RD13ESAB2
C927
1μF
C925
25V
220μF
D915
MA165
R951
5.6K
IC906A
NJM2902N
D931
MA165
R974
10K
ABL
C934
0.1μF
PR⊕
PR⊖
CO-96H
R921
1.5K
R935
43K
R936
20KB
TP902 TP903
R923
220
Q915
2SA933S
R922
3.3K
D908
RD16ESAB1
CO-55H
ABL
GND
NC

■ MODIFICATION OF SCHEMATIC DIAGRAM
(On page 47 of Original **29GA Service Manual)**

Original

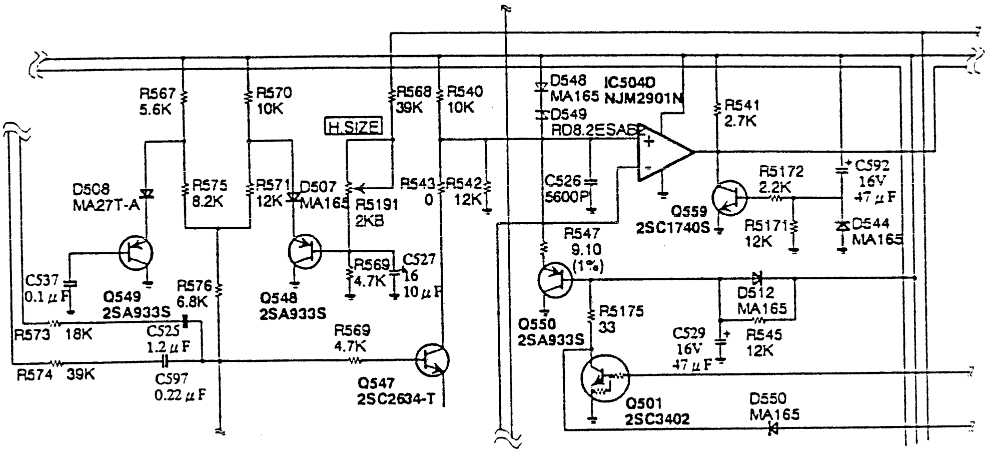

L508
ELHKLB010B
RL501
VS-18MB-UL3
D541
MA165
Q553
2SC1740S
R5133
4.7K
R5185
10K
(H.LIN5)
R5122
10K
Q523
2SC3399
(H.LIN4)
R5123
10K
Q524
2SC3399
(H.LIN3)
R5124
10K
Q525
2SC3399
(H.LIN2)
R5125
10K
Q526
2SC3399
(H.LIN1)
R5126
10K
Q527
2SC3399
Q520
2SD2375
R5120
8.2
(2W)
R5115
2.2K
D533
MA165
R5119
2.2
D532
MA165
R5118
2.2
Q521
2SB1299-P
Q522
2SC3946
R581
1.2K
(5W)
R5117
1K
Q510
2SD1264-P
C561
160V
10
R582
10
(1W)
R586
15K
(1%)
R584
56K
(1%)
R580
0.22
(0.5W)
R583
2.2K
(1W)
Q511
MPSA43C
(UPH51)
Q512
2SC3402
R585
3.3K
(1%)
+125V
R593
1K
R594
10K
R592
1.5
(1W)
Q510
2SD1264-P
C582
16V
10
+15V
(UPH29)
Q509
2SC3402
+12V
D537
EK16
R590
2.2
(7W)
Q510
2SD1264-P
C585 (3%)
1.8KV 1000 μF
C586 (3%)
1.8KV 6800 μF
DY(H)

Modified

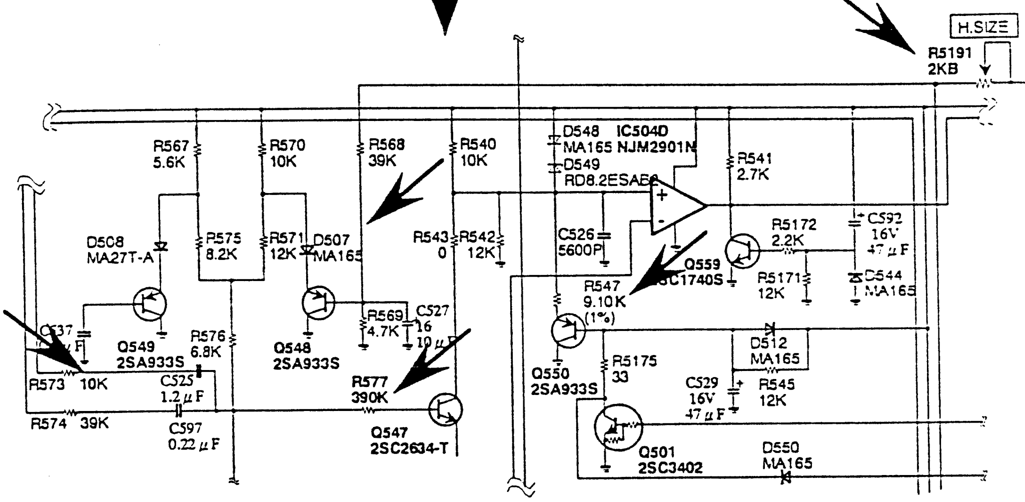

L508
ELHKLB010B
RL501
VS-18MB-UL3
D541
MA165
Q553
2SC1740S
R5133
4.7K
R5185
10K
(H.LIN5)
R5122
10K
Q523
2SC3399
(H.LIN4)
R5123
10K
Q524
2SC3399
(H.LIN3)
R5124
10K
Q525
2SC3399
(H.LIN2)
R5125
10K
Q526
2SC3399
(H.LIN1)
R5126
10K
Q527
2SC3399
Q520
2SD2375
R5120
8.2
(2W)
R5115
2.2K
D533
MA165
R5119
2.2
D532
MA165
R5118
2.2
Q521
2SB1299-P
Q522
2SC3946
R581
1.2K
(5W)
R5117
1K
Q510
2SD1264-P
C561
160V
10μF
R582
10K
(1W)
R586
15K
(1%)
R584
56K
(1%)
R580
0.22
(0.5W)
R583
2.2K
(1W)
Q511
MPSA43C
(UPH29)
Q512
2SC3402
R585
3.3K
(1%)
+125V
R593
1K
R594
10K
R592
1.5
(1W)
Q510
2SD1264-P
C582
16V
10μF
+15V
(H.LIN5)
Q509
2SC3402
+12V
D537
EK16
R590
2.2
(7W)
Q510
2SD1264-P
R5189
12
(2W)
C585 (3%)
1.8KV 1000pF
C586 (3%)
1.8KV 6800pF
DY(H)

■ MODIFICATION OF SCHEMATIC DIAGRAM
(On page 47 of Original 29GA Service Manual)

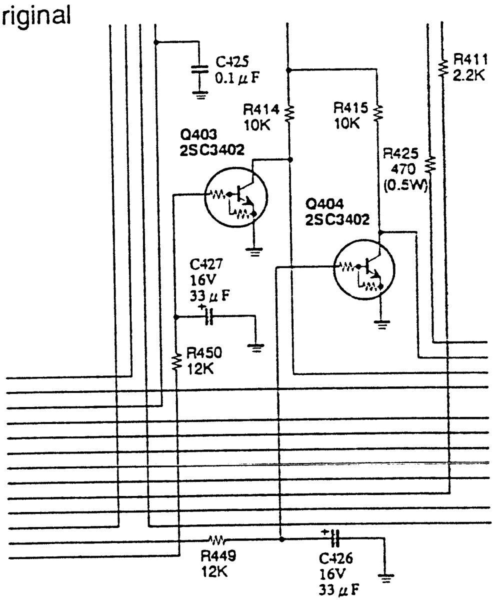
Original


R567
5.6K
R570
10K
R568
39K
R540
10K
H.SIZE
D548
MA165
IC504D
NJM2901N
D549
RD8.2ESAB
R541
2.7K
D508
MA27T-A
R575
8.2K
R571
12K
D507
MA165
R5191
2KB
R543
0
R542
12K
C526
5600P
R5172
2.2K
C592
16V
47μF
Q559
2SC1740S
R5171
12K
D544
MA165
R547
9.10
(1%)
C537
0.1μF
Q549
2SA933S
R576
6.8K
Q548
2SA933S
R569
4.7K
C527
16
10μF
Q550
2SA933S
R5175
33
D512
MA165
R573
18K
C525
1.2μF
R569
4.7K
C529
16V
47μF
R545
12K
R574
39K
C597
0.22μF
Q547
2SC2634-T
Q501
2SC3402
D550
MA165

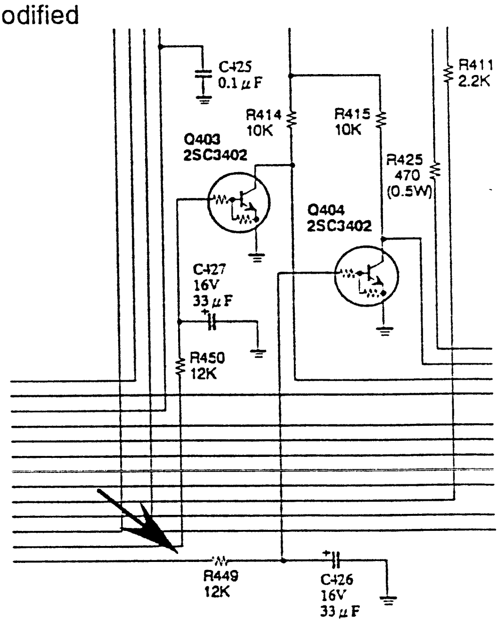
Modified


H.SIZE
R5191
2KB
R567
5.6K
R570
10K
R568
39K
R540
10K
D548
MA165
IC504D
NJM2901N
D549
RD8.2ESAB
R541
2.7K
D508
MA27T-A
R575
8.2K
R571
12K
D507
MA165
R543
0
R542
12K
C526
5600P
R5172
2.2K
C592
16V
47μF
Q559
2SC1740S
R5171
12K
D544
MA165
R547
9.10K
(1%)
C537
Q549
2SA933S
R576
6.8K
Q548
2SA933S
R569
4.7K
C527
16
10μF
Q550
2SA933S
R5175
33
D512
MA165
R573
10K
C525
1.2μF
R577
390K
C529
16V
47μF
R545
12K
R574
39K
C597
0.22μF
Q547
2SC2634-T
Q501
2SC3402
D550
MA165

Original

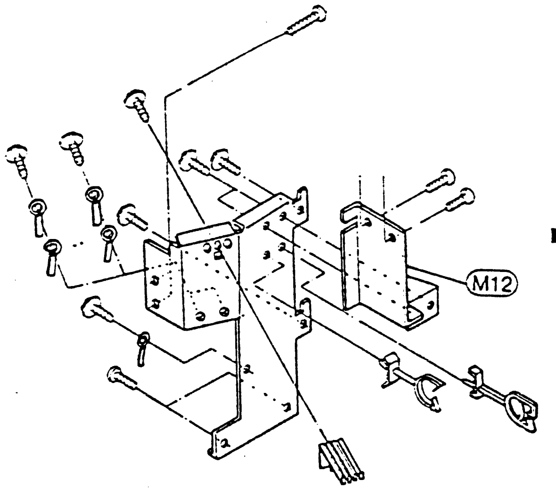

C425
0.1μF
R411
2.2K
R414
10K
R415
10K
Q403
2SC3402
R425
470
(0.5W)
Q404
2SC3402
C427
16V
33μF
R450
12K
R449
12K
C426
16V
33μF

Modified

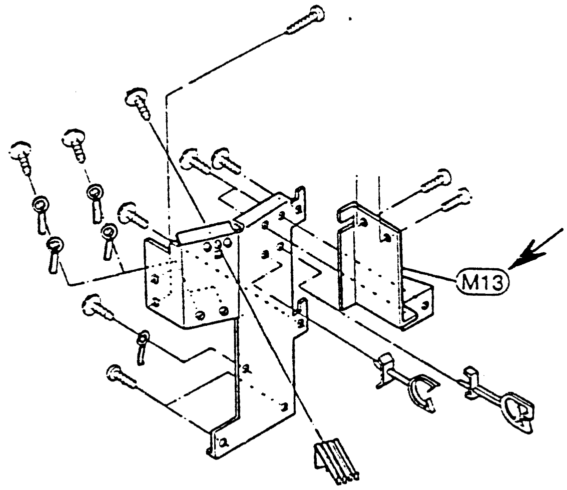

C425
0.1μF
R411
2.2K
R414
10K
R415
10K
Q403
2SC3402
R425
470
(0.5W)
Q404
2SC3402
C427
16V
33μF
R450
12K
R449
12K
C426
16V
33μF

■ MODIFICATION OF EXPLODED VIEWS
(On page 50 of Original **29GA Service Manual**)

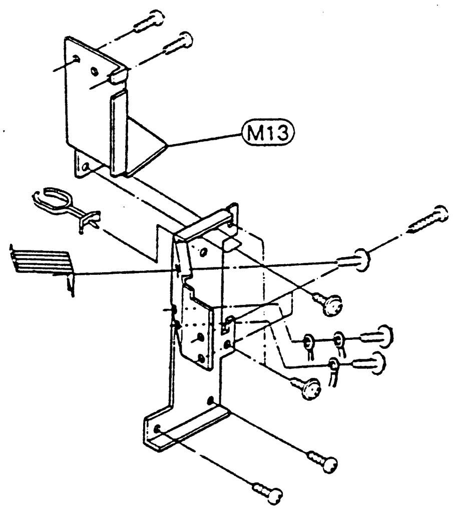
Original



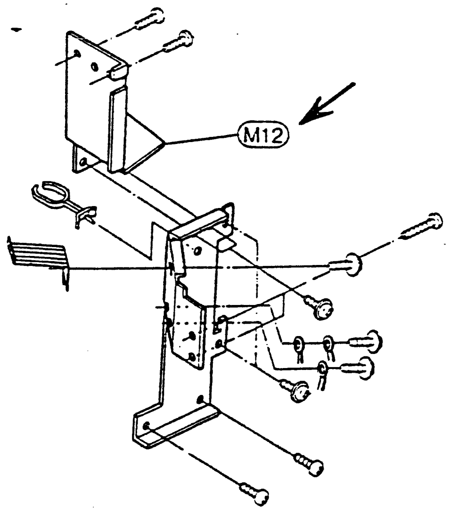
Modified



Original



Modified



Service Manual

Supplement - 2

ViewSonic 29GA

Model No. 2964GA-1

Please file and use this supplement manual together with the service manual for Model No. 2964GA-1 ,

IMPORTANT

Subject ... This change has been introduced to improve reliability.

■ REPLACEMENT PARTS LIST

NOTE: Important Safety Notice.
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components,use only manufacturer's specified parts.

Interchangeability Code		See the Code column on the following parts number list.
Parts	Set Production	
A Original New	Early Late	Original or new parts may be used in early or late production sets. Use original parts until exhausted , then stock new parts.
B Original New	Early Late	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts where possible , then stock new parts.
C Original New	Early Late	New parts only may be used in early or late production sets. Stock new parts.
D Original New	Early Late	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.

E Addition	F Deletion	G Correction	H Change the number of parts per set

Late production sets Serial No. T153800001B ~

Page	Ref. No.	Part No.		Part Name and Description	Per Set	Remarks	Code	Figure
		Original	New					
58	D820	RD30ESAB1	RD30ESAB3	Zener Diode (Vz=30V)	1		G	3

Late production sets Serial No. T153800001B ~

Page	Ref. No.	Part No.		Part Name and Description	Per Set	Remarks	Code	Figure
		Original	New					
53	R597	ERQ1ABJP5R6S	ERQ2ABJP5R6S	F 5.6 J 2W	1		G	5
74	R6315	ERJ6GEYJ201	ERDS2TJ181	C 180 J 1/4W	1		G	7
75	R6635	——	ERDS2TJ472	C 4.7K J 1/4W	1		E	7
76	C6524	——	KCEA1CU101B	E 100 16V	1		E	7
76	D6511	——	MA165	Diode	1		E	7

ViewSonic

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Late production sets Serial No. T153800001B ~

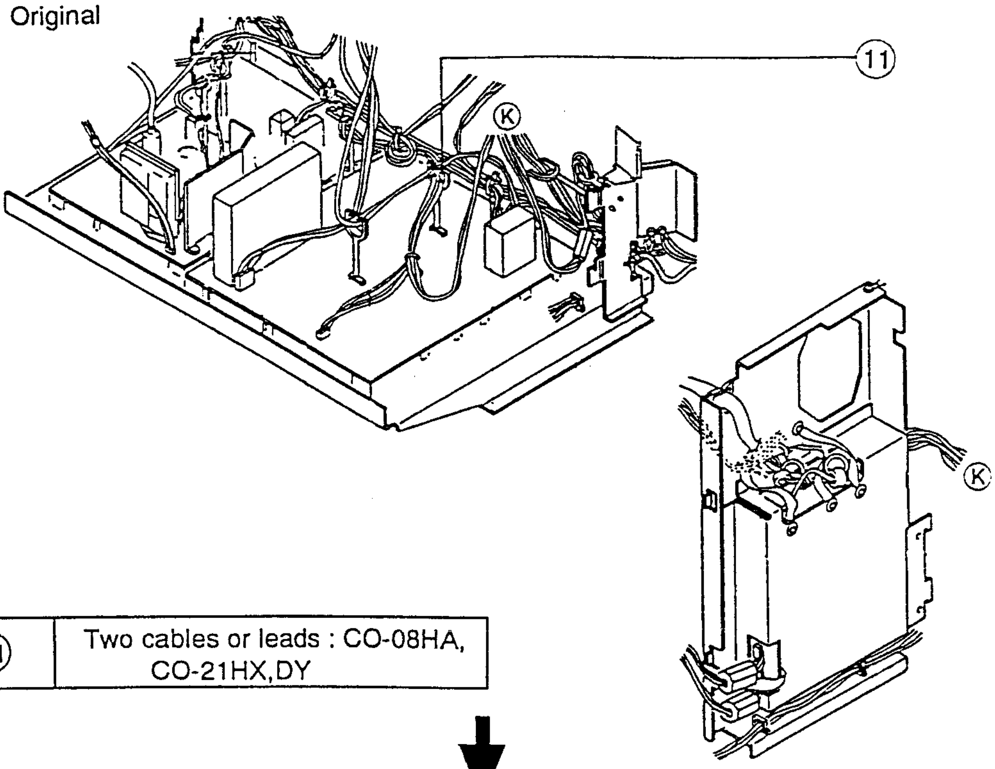
Page	Ref. No.	Part No.		Part Name and Description	Per Set	Remarks	Code	Figure
		Original	New					
53	R553	ERDS2TJ473	ERDS2TJ273	C 27K J 1/4W	1		G	6

Late production sets Serial No. T153800001B ~

Page	Ref. No.	Part No.		Part Name and Description	Per Set	Remarks	Code	Figure
		Original	New					
51	M49	PUN92701A-J	PUN92701A1-J	A-board Complete(RTL)	1		G	8
51	M80	HL-18-0	←	Clamper	1		H	1,9
52	B6	XTV3+8F	←	3 X 8 mm Screw	2		H	8
52	B15	———	XWA3B	Spring Lock Washer	2		E	8
52	R438	ERDS2TJ102	EROS2CKF3161	M 3.16K F 1/4W	1		G	4
52	R439	ERDS2TJ103	EROS2CKF1002	M 10.0K F 1/4W	1		G	4
52	R440	ERDS2TJ152	T3A206=15A	Jumper Lead	1		G	4
52	R441	ERG1ANJ270H	ERG3ANJ390H	M 39 J 3W	1		G	4
52	R442	ERG1ANJ270H	ERG3ANJ390H	M 39 J 3W	1		G	4
52	R452	ERDS2TJ273	EROS2CKF1202	M 12.0K F 1/4W	1		G	4
52	R453	ERDS2TJ273	EROS2CKF1202	M 12.0K F 1/4W	1		G	4
52	R454	ERDS2TJ273	EROS2CKF2742	M 27.4K F 1/4W	1		G	4
52	R455	ERDS2TJ273	EROS2CKF2742	M 27.4K F 1/4W	1		G	4
52	R456	ERDS2TJ273	EROS2CKF2742	M 27.4K F 1/4W	1		G	4
52	R457	ERDS2TJ273	EROS2CKF2742	M 27.4K F 1/4W	1		G	4
55	D408	RD9.1ESAB2	RD12ESAB1	Zener Diode (Vz=12v)	1		G	4
55	D409	RD9.1ESAB2	RD12ESAB1	Zener Diode (Vz=12v)	1		G	4
55	D418	RD5.6ESAB3	RD5.6JSAB1	Zener Diode (Vz=5.6v)	1		G	5
56	Q413	2SB1548A	PUWX5270102	Assembly	1		G	1,2,4,8
56	Q414	2SD2374A	PUWX5270103	Assembly	1		G	1,2,4,8
57	CO-01T	———	PUWV8270101	3P Connector	1		E	2,4,8
57	CO-02T	———	PUWV8270103	3P Connector	1		E	2,4,8

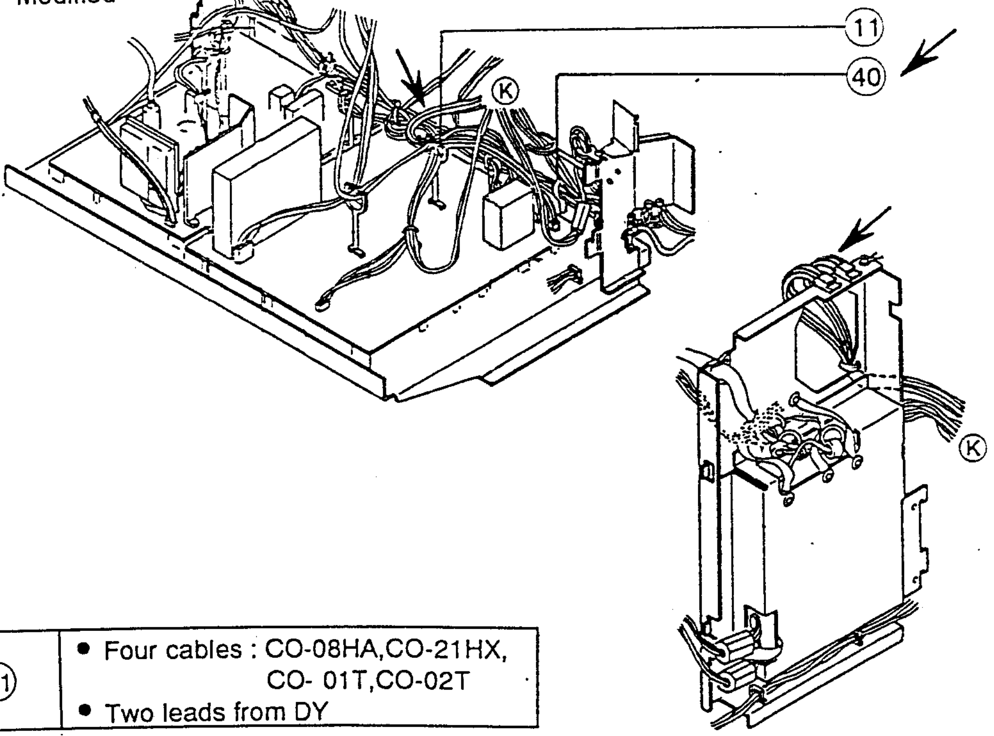
■ MODIFICATION OF CLAMPING AND WIRING POSITIONS OF INTERNAL LEADS
(On page 28 of Original **29GA Service Manual**)

Original



⑪	Two cables or leads : CO-08HA, CO-21HX,DY

Modified



⑪	• Four cables : CO-08HA,CO-21HX, CO- 01T,CO-02T • Two leads from DY

㊵	Nine cables : CO-06AN,CO-10D,CO-31FX, CO-32FX,CO-33FX,CO-44AD, CO-50BN,CO-55HN,CO-71EX

Figure 1

■ MODIFICATION OF WIRING DIAGRAM
(On page 40 of Original 29GA Service Manual)

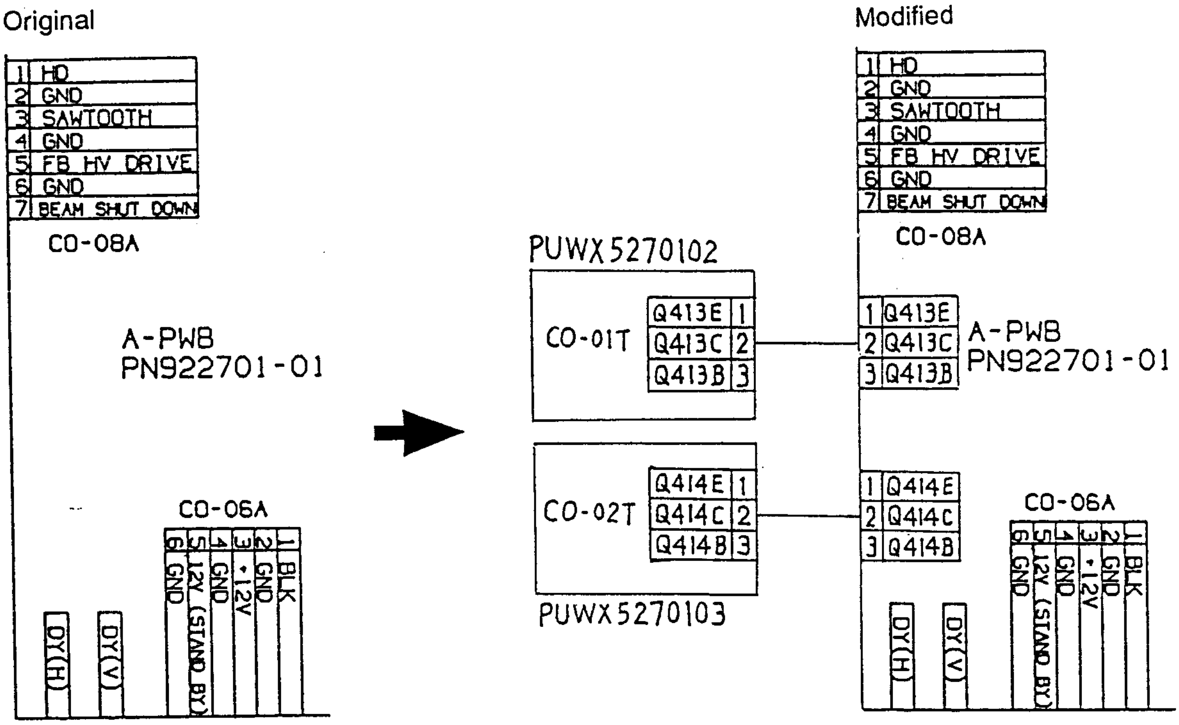

Original
1 HD
2 GND
3 SAWTOOTH
4 GND
5 FB HV DRIVE
6 GND
7 BEAM SHUT DOWN
CO-08A
A-PWB
PN922701-01
CO-06A
6 GND
5 12V (STAND BY)
4 GND
3 +12V
2 GND
1 BLK
DY(H)
DY(V)
Modified
PUWX5270102
CO-01T
Q413E 1
Q413C 2
Q413B 3
CO-02T
Q414E 1
Q414C 2
Q414B 3
PUWX5270103
1 Q413E
2 Q413C
3 Q413B
1 Q414E
2 Q414C
3 Q414B

Figure 2

■ MODIFICATION OF SCHEMATIC DIAGRAM
(On page 45 of Original 29GA Service Manual)

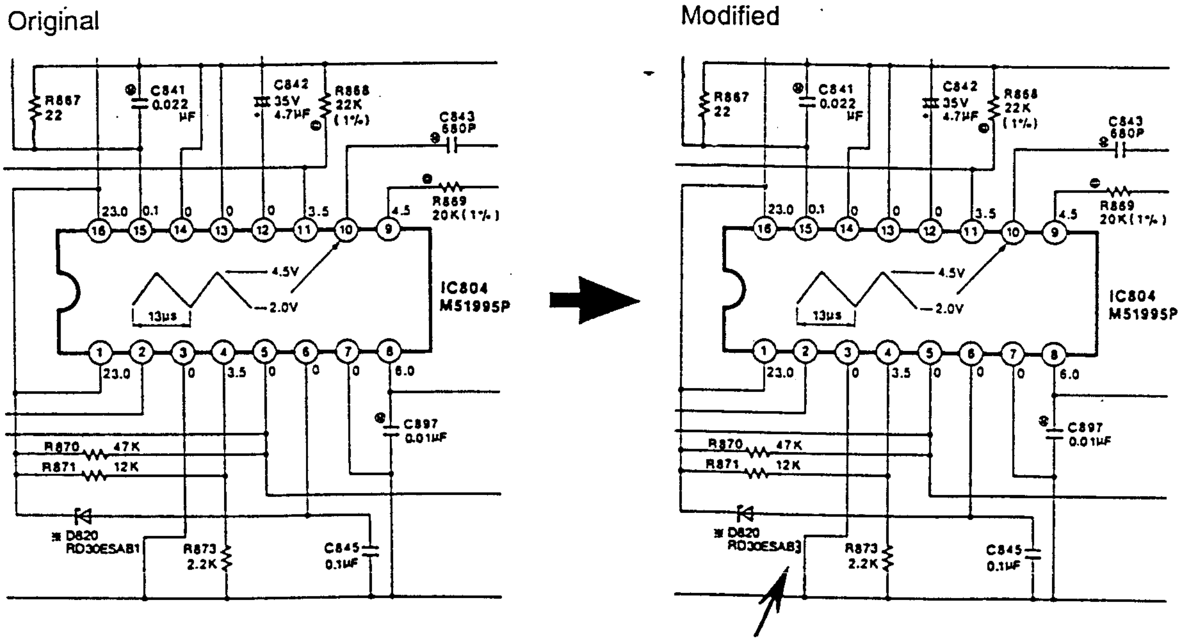
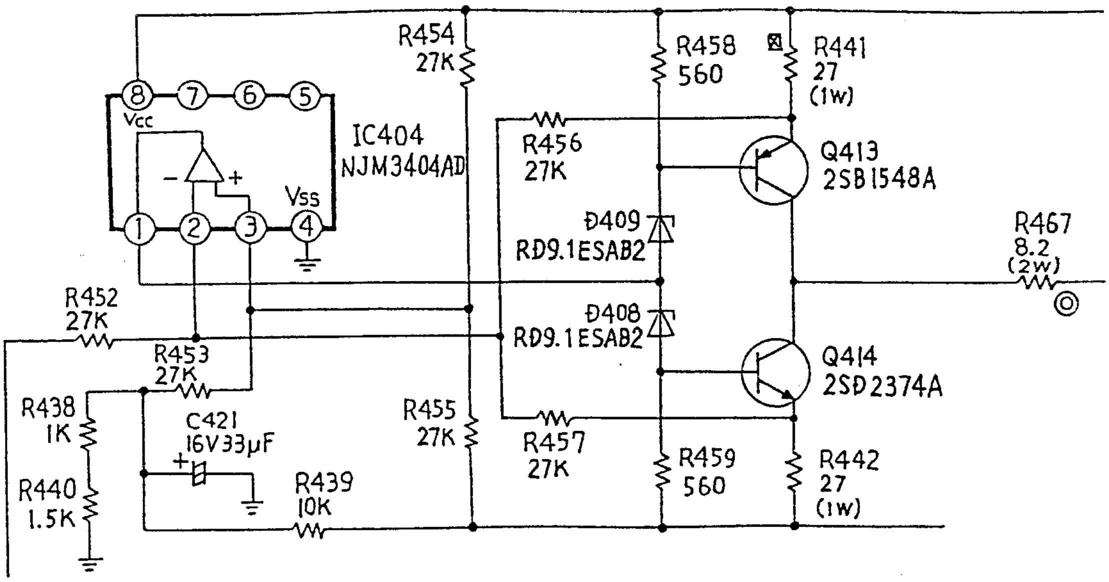

Original
Modified
R867 22
C841 0.022 μF
C842 35V 4.7μF
R868 22K (1%)
C843 680P
R869 20K(1%)
IC804 M51995P
4.5V
2.0V
13μs
23.0
0.1
3.5
4.5
6.0
C897 0.01μF
R870 47K
R871 12K
D820 RD30ESAB1
D820 RD30ESAB3
R873 2.2K
C845 0.1μF

Figure 3

■ MODIFICATION OF SCHEMATIC DIAGRAM
(On page 47 of Original **29GA Service Manual**)

Original


R454
27K
R458
560
R441
27
(1w)
IC404
NJM3404AD
Vcc
Vss
8
7
6
5
1
2
3
4
R456
27K
Q413
2SB1548A
D409
RD9.1ESAB2
R467
8.2
(2w)
R452
27K
D408
RD9.1ESAB2
Q414
2SD2374A
R453
27K
R438
1K
C421
16V33μF
R455
27K
R457
27K
R459
560
R442
27
(1w)
R440
1.5K
R439
10K

Modified

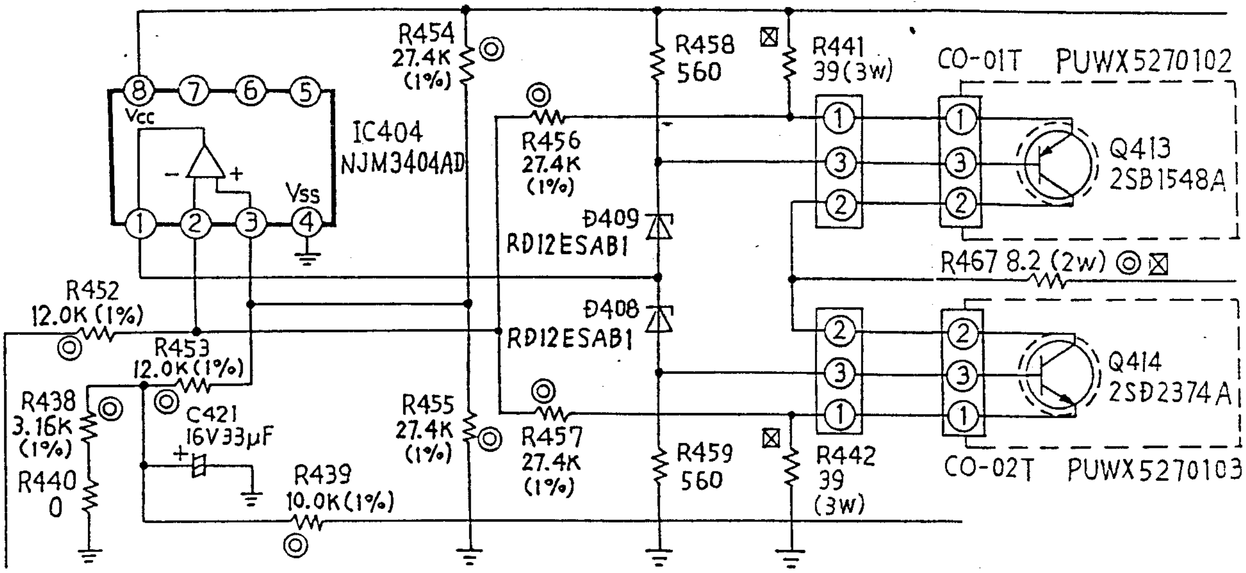
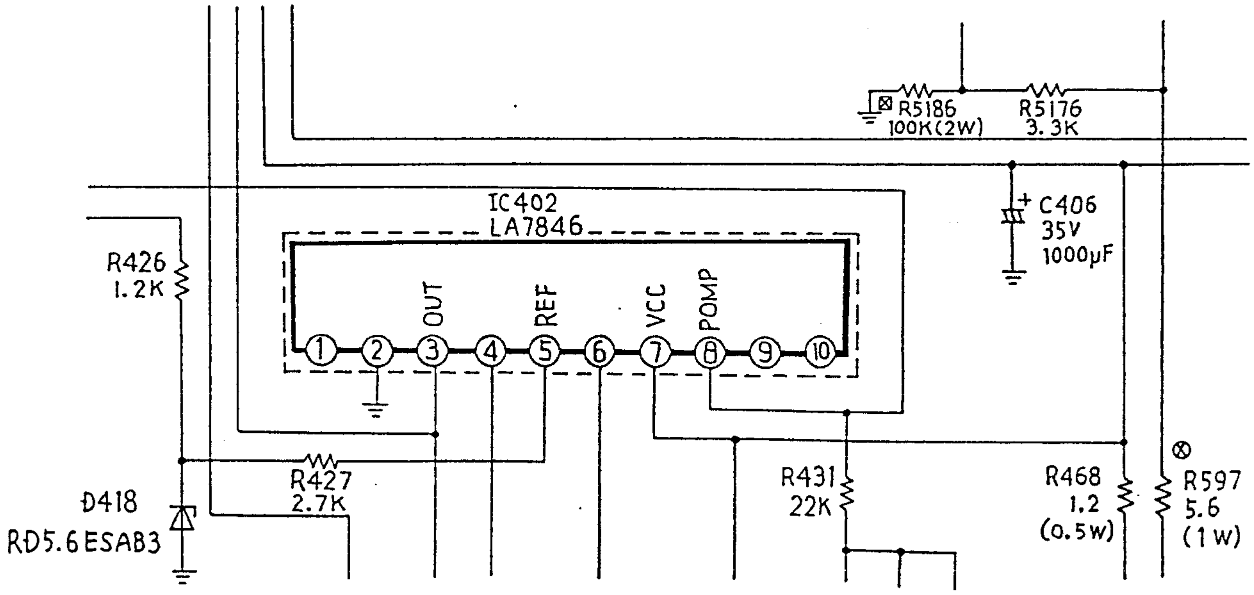

R454
27.4K
(1%)
R458
560
R441
39(3w)
CO-01T
PUWX5270102
IC404
NJM3404AD
Vcc
Vss
8
7
6
5
1
2
3
4
R456
27.4K
(1%)
Q413
2SB1548A
D409
RD12ESAB1
R467 8.2 (2w)
R452
12.0K (1%)
D408
RD12ESAB1
R453
12.0K (1%)
Q414
2SD2374A
R438
3.16K
(1%)
C421
16V33μF
R455
27.4K
(1%)
R457
27.4K
(1%)
R459
560
R442
39
(3W)
CO-02T
PUWX5270103
R440
0
R439
10.0K (1%)

Figure 4

■ MODIFICATION OF SCHEMATIC DIAGRAM

(On page 47 of Original 29GA Service Manual)

Original


R5186
100K(2W)
R5176
3.3K
IC402
LA7846
C406
35V
1000μF
R426
1.2K
OUT
REF
VCC
POMP
1
2
3
4
5
6
7
8
9
10
R427
2.7K
D418
RD5.6ESAB3
R431
22K
R468
1.2
(0.5W)
R597
5.6
(1W)

Modified

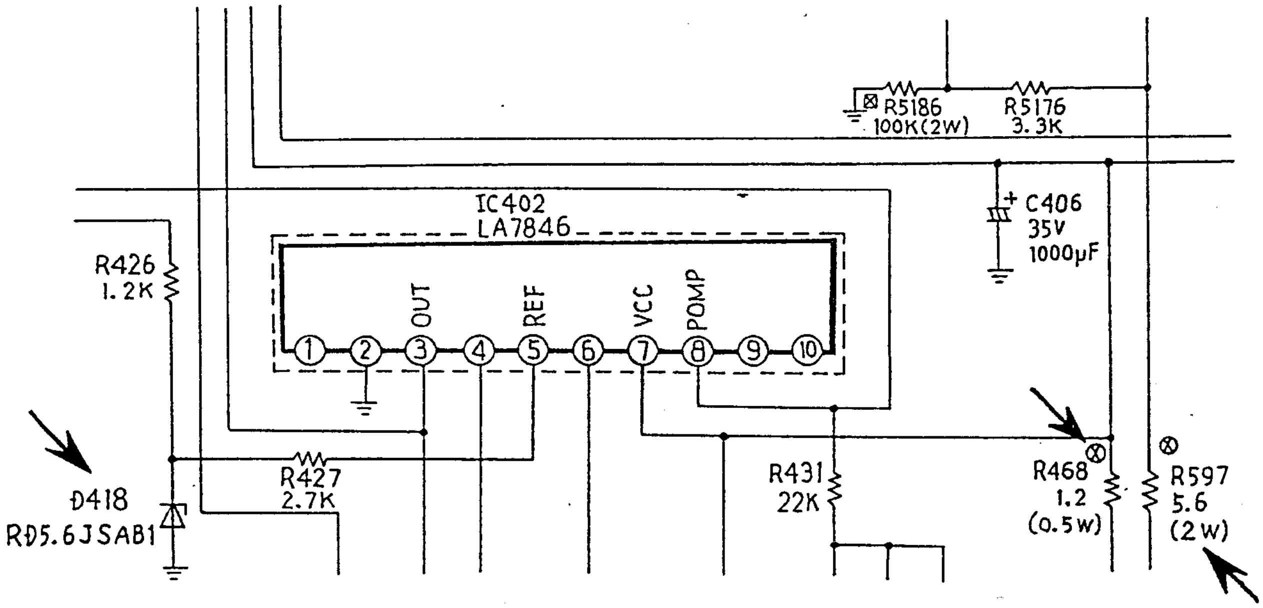
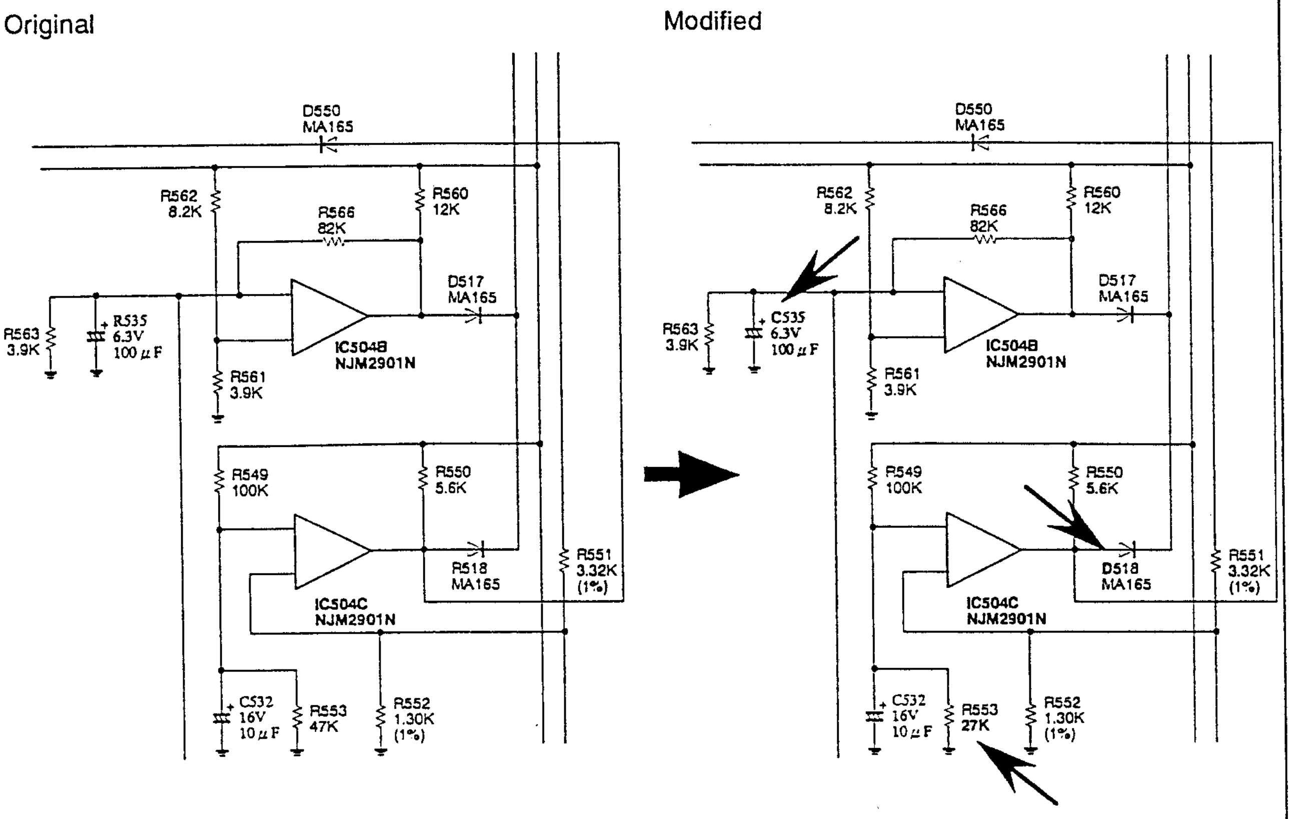

R5186
100K(2W)
R5176
3.3K
IC402
LA7846
C406
35V
1000μF
R426
1.2K
OUT
REF
VCC
POMP
1
2
3
4
5
6
7
8
9
10
R427
2.7K
D418
RD5.6JSAB1
R431
22K
R468
1.2
(0.5W)
R597
5.6
(2W)

Figure 5

■ MODIFICATION OF SCHEMATIC DIAGRAM
(On page 47 of Original **29GA Service Manual**)

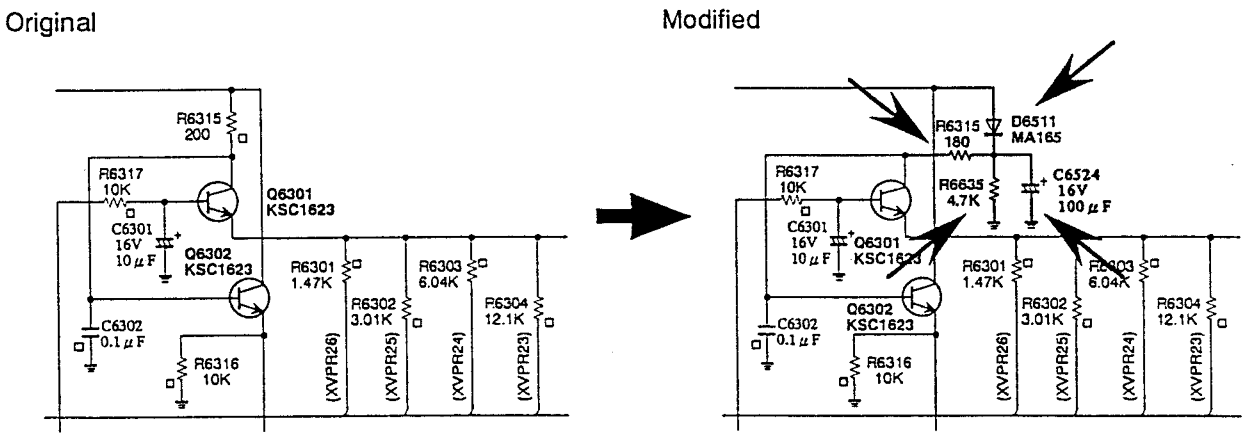

Original

Modified

D550
MA165
R562
8.2K
R560
12K
R566
82K
D517
MA165
R563
3.9K
C535
6.3V
100 μF
R535
6.3V
100 μF
IC504B
NJM2901N
R561
3.9K
R549
100K
R550
5.6K
R551
3.32K
(1%)
R518
D518
MA165
IC504C
NJM2901N
C532
16V
10 μF
R553
47K
27K
R552
1.30K
(1%)

Figure 6

■ MODIFICATION OF SCHEMATIC DIAGRAM
(On page 49 of Original **29GA Service Manual**)


Original

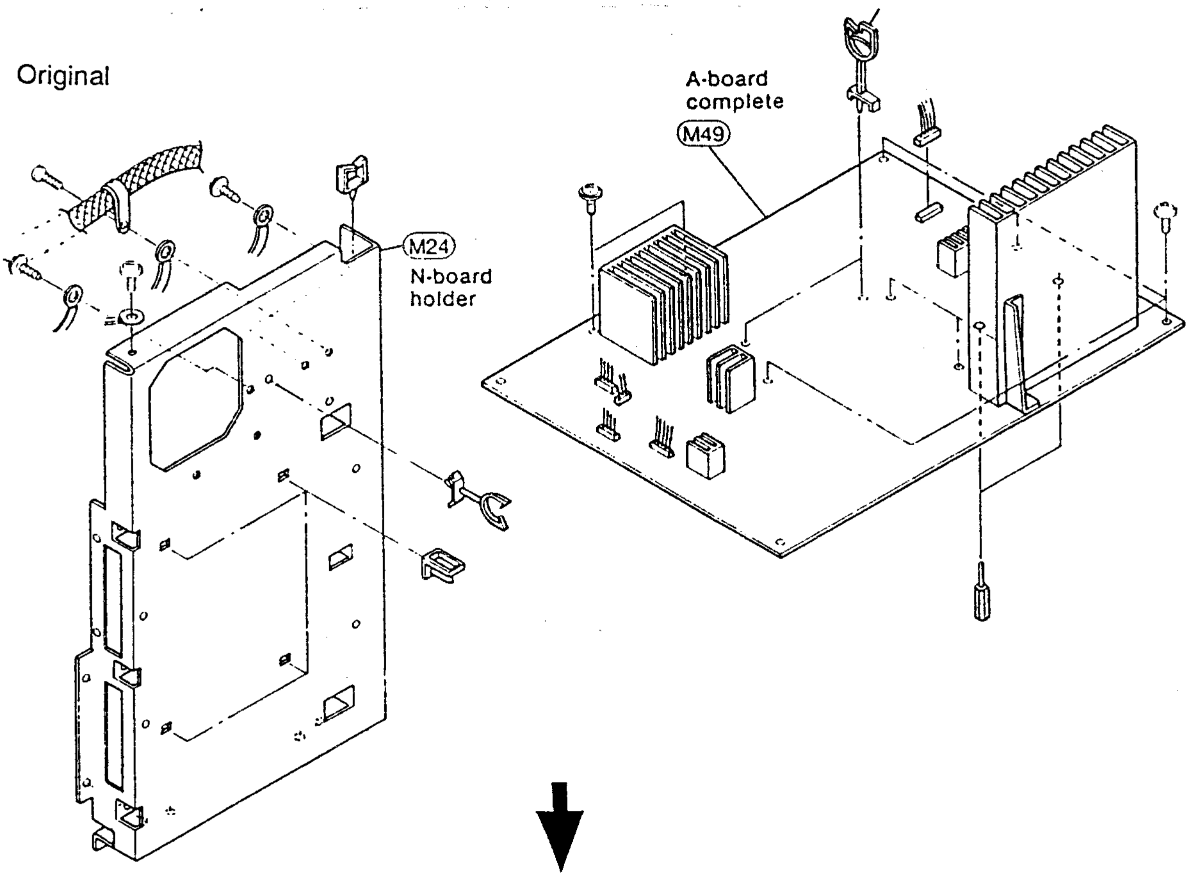
Modified

R6315
200
180
D6511
MA165
R6317
10K
Q6301
KSC1623
C6301
16V
10 μF
Q6302
KSC1623
R6635
4.7K
C6524
16V
100 μF
C6302
0.1 μF
R6316
10K
R6301
1.47K
R6302
3.01K
R6303
6.04K
R6304
12.1K
(XVPR26)
(XVPR25)
(XVPR24)
(XVPR23)

Figure 7

■ MODIFICATION OF EXPLODED VIEWS
(On page 50 of Original **29GA Service Manual)**

Original


A-board
complete
M49
M24
N-board
holder

Modified

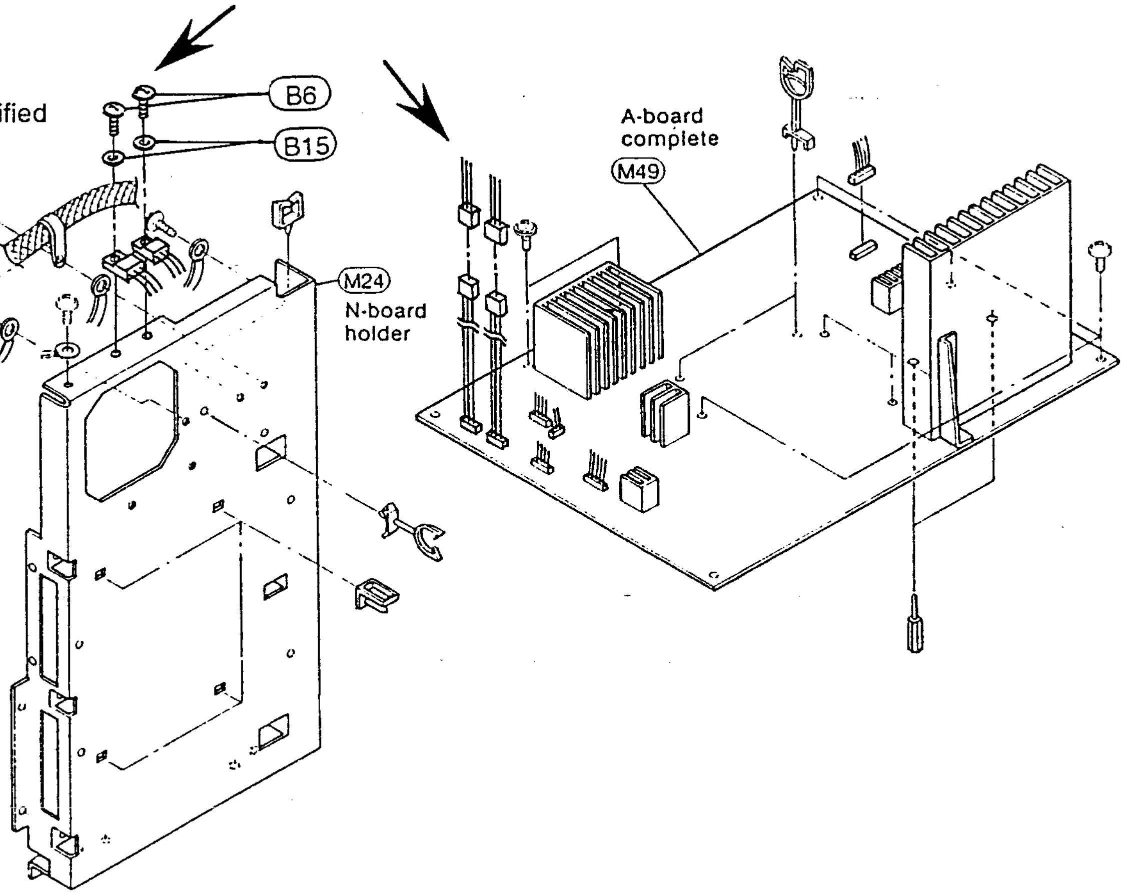
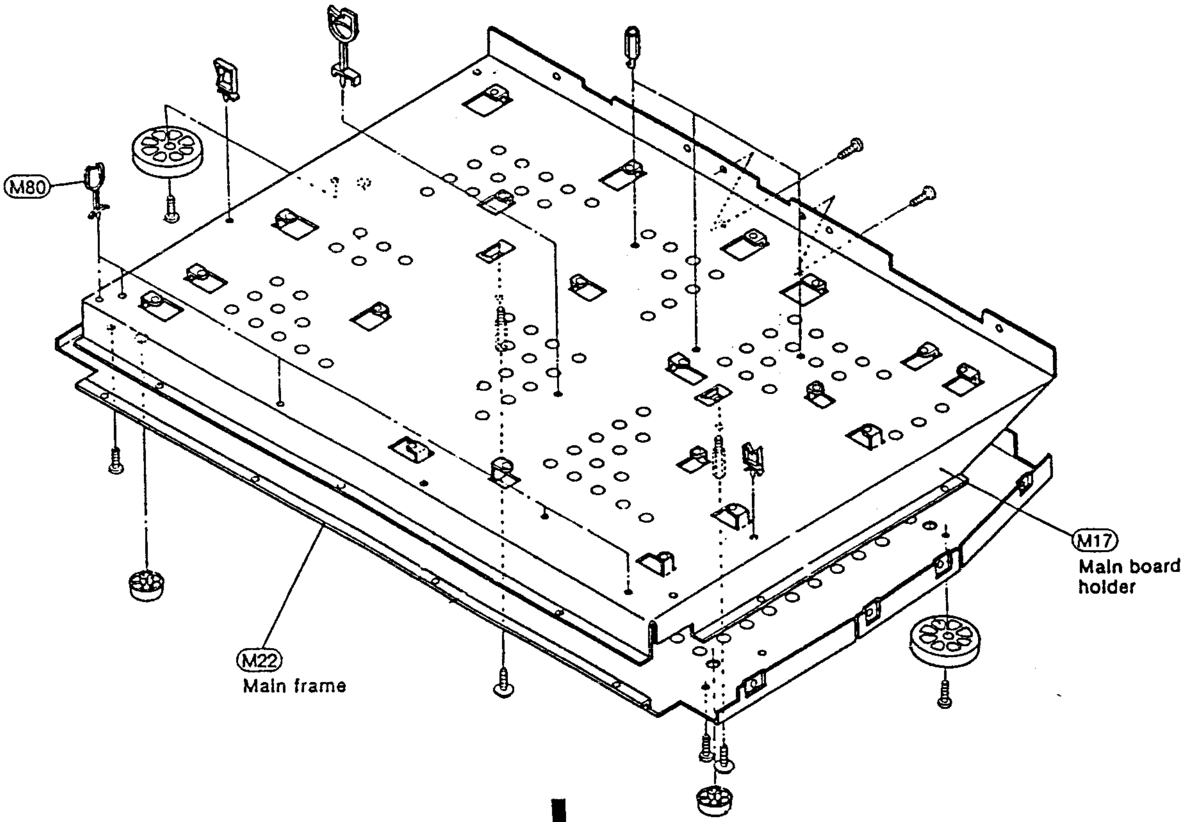

B6
B15
A-board
complete
M49
M24
N-board
holder

Figure 8

■ MODIFICATION OF EXPLODED VIEWS

(On page 50 of Original **29GA Service Manual)**

Original


M80
M17
Main board holder
M22
Main frame

Modified

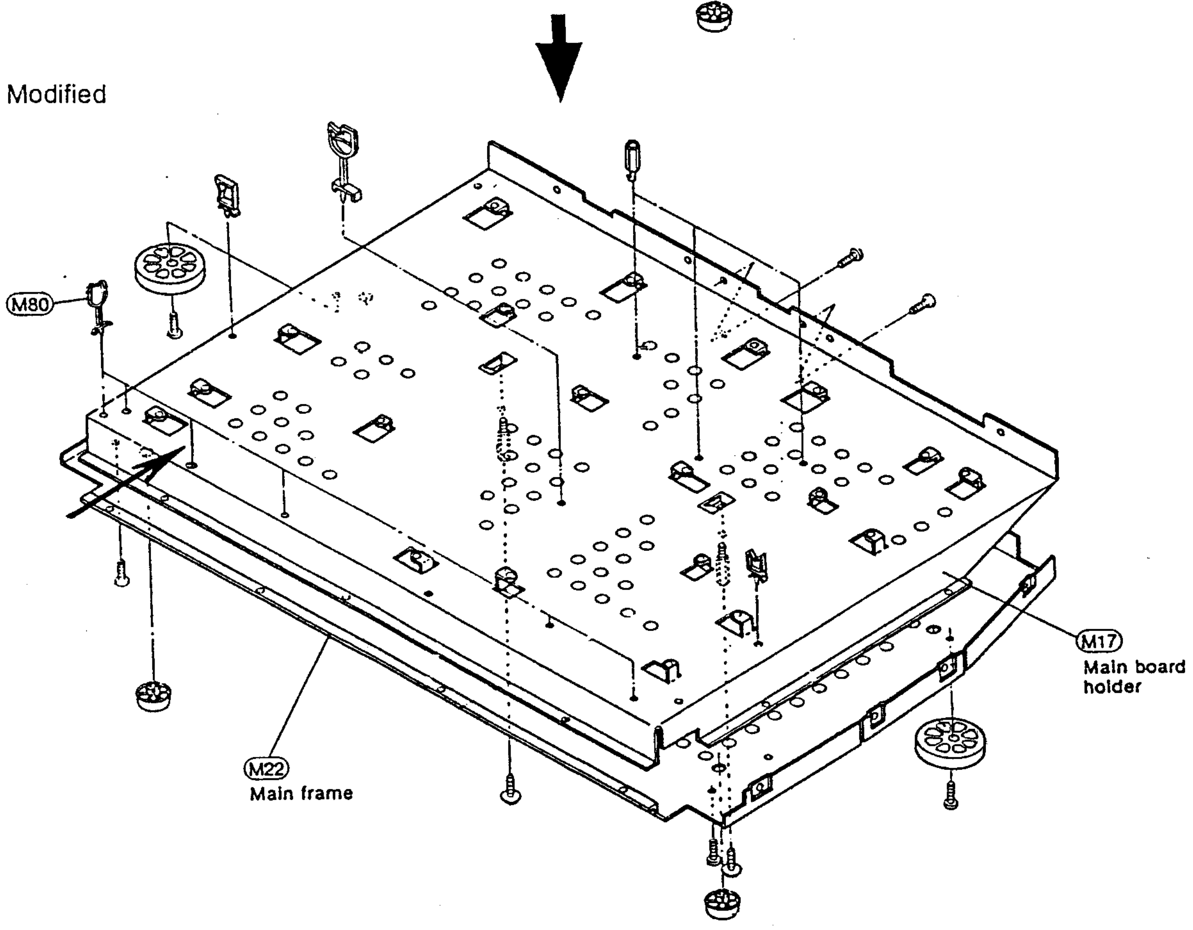

M80
M17
Main board holder
M22
Main frame

Figure 9

Service Manual

Supplement - 3

ViewSonic 29GA

Model No. 2964GA-1

Please file and use this supplement manual together with the service manual for Model No. 2964GA-1

IMPORTANT

Subject ... This change has been introduced to improve reliability.

■ REPLACEMENT PARTS LIST

NOTE: Important Safety Notice.
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components,use only manufacturer's specified parts.

Interchangeability Code		See the Code column on the following parts number list.
Parts	Set Production	
A Original New	Early Late	Original or new parts may be used in early or late production sets. Use original parts until exhausted , then stock new parts.
B Original New	Early Late	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts where possible , then stock new parts.
C Original New	Early Late	New parts only may be used in early or late production sets. Stock new parts.
D Original New	Early Late	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.

E Addition	F Deletion	G Correction	H Change the number of parts per set

Page	Ref. No.	Part No.		Part Name and Description	Per Set	Remarks	Code	Figure
		Original	New					
74	R6301	ERJ6ENF1471	ERJ6ENF1501	C 1.50K F 1/10W	1		A	13
74	R6401	ERJ6ENF1471	ERJ6ENF1501	C 1.50K F 1/10W	1		A	12
74	R6420	ERJ6ENF1471	ERJ6ENF1501	C 1.50K F 1/10W	1		A	12
74	R6501	ERJ6ENF1471	ERJ6ENF1501	C 1.50K F 1/10W	1		A	12

When the serial No. label of the DY has *Blue* color , please replace this part (R6315) .

Page	Ref. No.	Part No.		Part Name and Description	Per Set	Remarks	Code	Figure
		Original	New					
74	R6315	ERJ6GEYJ121	ERDS2TJ101	C 100 J 1/4W	1		—	13

When the serial No. label of the DY has *White* color , please replace this part (R6315) .

Page	Ref. No.	Part No.		Part Name and Description	Per Set	Remarks	Code	Figure
		Original	New					
74	R6315	ERJ6GEYJ201	ERDS2TJ181	C 180 J 1/4W	1		—	13

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Late production sets Serial No. T153800001B ~

Page	Ref. No.	Part No.		Part Name and Description	Per Set	Remarks	Code	Figure
		Original	New					
51	M24	PUKR9270102	PUKR9270102A	N-Board Holder	1	※1	G	3,14
51	M31	PUKR9270104	PUKR9270104A	D-Board Holder	1	※1	G	1,6,17
51	M36	PUKR9270101	PUKR9270101A	B-Board Holder	1	※1	G	2,5,18
51	M85	EDS-1717U	←	Clamper	1	※1	H	17
52	M90	TMM6428-1	←	Clamper	1	※1	H	17
52	M95	———	PUXA9270110	Shock Absorbing Tape	4	※1	E	15,16
52	M96	———	PUKR9270147	Speaker Upper Holder (R) 1	1	※1	E	2,4,16
52	M97	———	PUKR9270148	Speaker Upper Holder (R) 2	1	※1	E	2,18
52	M98	———	PUKR9270149	Speaker Upper Holder (L)	1	※1	E	3,4,15
52	M99	———	CC-1005	Wire Clip	1	※1	E	5,18
52	B4	XTW3+6L	←	3 X 6 mm Screw	7	※1	H	14,16,17,18
52	B6	XTV3+8F	←	3 X 8 mm Screw	1	※1	H	17
52	B7	XTV3+8J	←	3 X 8 mm Screw	1	※1	H	18
52	B15	XWA3B	←	Spring Lock Washer	1	※1	H	17
62	R3865	———	ERDS1TJ561	C 560 J 1/2W	1	※1	E	11
62	R3866	———	EROS2CKF2052	M 20.5K F 1/4W	1	※1	E	11
62	R3867	———	EROS2CKF2491	M 2.49K F 1/4W	1	※1	E	11
62	R3868	———	RGB40HS18	W 18 J 40W	1	※1	E	6,7,11,17
62	R3869	———	ERDS1TJ561	C 560 J 1/2W	1	※1	E	11
64	C3845	———	KCA1VM102	E 1000 35V	1	※1	E	11
64	IC3805	———	TA76431S	Shunt Regulator	1	※1	E	11
64	Q3802	———	2SB1548-P	Transistor	1	※1	E	6.7.11.17
69	R7091	———	RF50SJ272L12	F 2.7K J 1/2W	1	※1	E	8
70	C7091	———	KCEA2DGE220E	E 22 200V	1	※1	E	8
72	Q7091	———	2SD1446	Transistor	1	※1	E	8

Early production sets Serial No. ~T153800062B
Late production sets Serial No. T153800063B ~

Page	Ref. No.	Part No.		Part Name and Description	Per Set	Remarks	Code	Figure
		Original	New					
—	J5319	T3A206=22.5A	———		0	※2	F	10
55	D419	———	MA165	Diode	1		E	
55	D420	———	MA165	Diode	1	※2	E	10

Early production sets Serial No. ~T153800114B
Late production sets Serial No. T153800115B ~

Page	Ref. No.	Part No.		Part Name and Description	Per Set	Remarks	Code	Figure
		Original	New					
51	M79	———	LWS-1S	Clamper	2	※3	E	18
51	M81	WS-2NS	←	Clamper	-2		H	

Early production sets Serial No. ~T153900238B
Late production sets Serial No. T153900239B ~

Page	Ref. No.	Part No.		Part Name and Description	Per Set	Remarks	Code	Figure
		Original	New					
53	R5134	ERG2ANJ681H	ERG2ANJ471H	M 470 J 2W	1	※4	D	10
54	R5182	ERG2ANJ681H	ERG2ANJ391H	M 390 J 2W	1	※4	D	10
55	C599	———	ECKD2H101KB5	C 100p K 500V	1	※4	E	10
—	J5505	T3A206=27.5A	———		0	※4	F	10
56	L510	———	ELEH5R6KA	Inductor(5.6 μ H)	1		E	
—	J7208	T3A206=17.5A	———		0	※4	F	9
72	L7081	———	ELEH5R6KA	Inductor(5.6 μ H)	1		E	

Early production sets Serial No. ~T154300317B
Late production sets Serial No. T154300318B ~

Page	Ref. No.	Part No.		Part Name and Description	Per Set	Remarks	Code	Figure
		Original	New					
59	—	—	XWG3FX	Plain Washer	4	※5	E	
59	—	—	XWA3B	Spring Lock Washer	4	※5	E	
59	—	XTV3+8J	←	Screw	-4	※5	H	
59	—	—	XTV3+10J	Screw	4		E	

Early production sets Serial No. ~T154500459B
Late production sets Serial No. T154500460B ~

Page	Ref. No.	Part No.		Part Name and Description	Per Set	Remarks	Code	Figure
		Original	New					
64	Q3802	2SB1548-P	—	Transistor	0	※6	F	6,7,11,17
52	M100	—	PUWX5270105	Assembly(Q3802)	1		E	
62	R3868	RGB40HS18	—	W 18 J 40W	0	※6	F	6,7,11,17
52	M101	—	PUWX5270106	Assembly(R3868)	1		E	
61	R3245	ERDS2TJ123	ERJ6GEYJ123	C 12K J 1/10W	1	※6	D	11
63	C3230	KCEA0JU101	KCEA0JU101E	E 100 6.3V	1	※6	D	
63	C3343	ECQB1H104JFW	ECQV1H104JMW	TF 0.1 J 50V	1	※7	B	
63	C3344	ECQB1H104JFW	ECQV1H104JMW	TF 0.1 J 50V	1	※7	B	
63	C3345	ECQB1H104JFW	ECQV1H104JMW	TF 0.1 J 50V	1	※7	B	
63	C3368	KCEA0JU101	KCEA0JU101E	E 100 6.3V	1	※6	D	
63	C3369	KCEA0JU101	KCEA0JU101E	E 100 6.3V	1	※6	D	
63	C3370	KCEA0JU101	KCEA0JU101E	E 100 6.3V	1	※6	D	
63	C3813	KCA1VM102	KCA1VM102E	E 1000 35V	1	※6	B	
64	C3845	KCA1VM102	KCA1VM102E	E 1000 35V	1	※6	D	
64	CO-11D	—	B2B-EH	2P Connector	1	※6	E	1,6,7,11
64	CO-12D	—	B3B-EH	3P Connector	1	※6	E	1,6,7,11

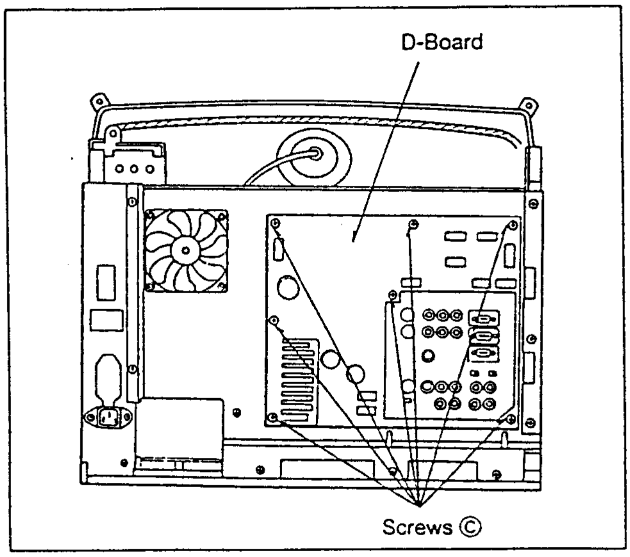
NOTE: Parts with mark ※(1~7) have been replaced at the same time.

■ MODIFICATION OF DISASSEMBLY PROCEDURES
(On page 21 of Original 29GA Service Manual)

Original

2-3. Removal of the D-Board

1. Disconnect connectors CO-09D, CO-10D, CO-41D, CO-42D, CO-43D, CO-44D, CO-46D, CO-47D, CO-48D, CO-49D and CO-53D on the D-Board.
2. Remove 7 screws © and remove the D-Board as shown in Figure 4.

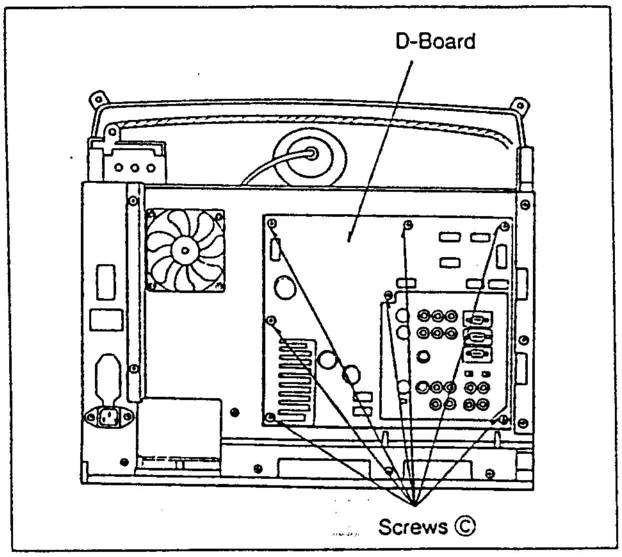


(Figure 4)

Modified (Serial No. T153800001B~)

2-3. Removal of the D-Board

1. Disconnect connectors CO-09D, CO-10D, CO-41D, CO-42D, CO-43D, CO-44D, CO-46D, CO-47D, CO-48D, CO-49D, CO-53D and CO-03T on the D-Board.
2. Remove 7 screws © and remove the D-Board as shown in Figure 4.

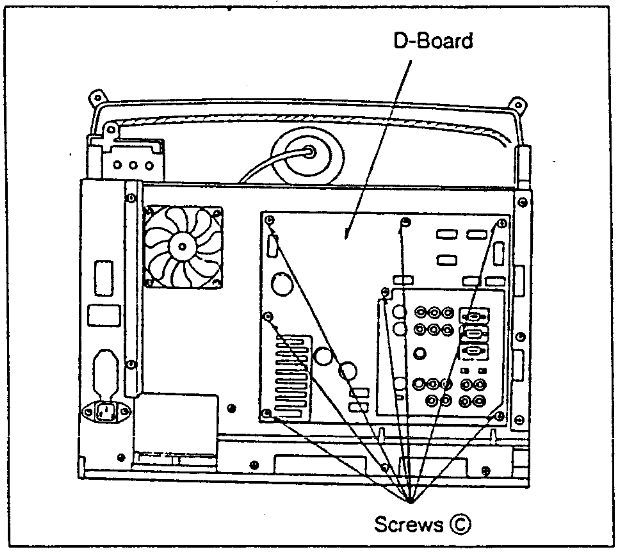


(Figure 4)

Modified (Serial No. T154500460B~)

2-3. Removal of the D-Board

1. Disconnect connectors CO-09D, CO-10D, CO-11D, CO-12D, CO-41D, CO-42D, CO-43D, CO-44D, CO-46D, CO-47D, CO-48D, CO-49D and CO-53D on the D-Board.
2. Remove 7 screws © and remove the D-Board as shown in Figure 4.



(Figure 4)

Figure 1

■ MODIFICATION OF DISASSEMBLY PROCEDURES
(On page 23 of Original **29GA Service Manual**)

Original

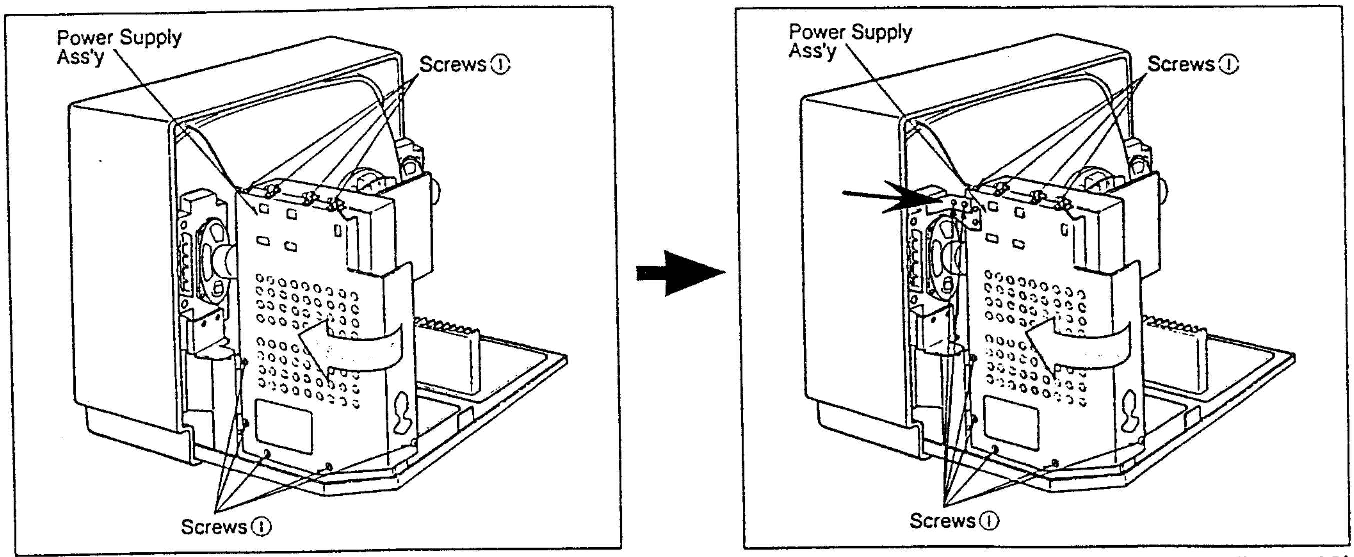
2-8. Open the Power Supply Ass'y

1. Remove 9 screws Ⓘ and open the derection indicated by the arrow as shown in Figure 10.

Modified

2-8. Open the Power Supply Ass'y

1. Remove 11 screws Ⓘ and open the derection indicated by the arrow as shown in Figure 10.


Power Supply Ass'y
Screws Ⓘ
Screws Ⓘ
Power Supply Ass'y
Screws Ⓘ
Screws Ⓘ

(Figure 10) (Figure 10)

Figure 2

■ MODIFICATION OF DISASSEMBLY PROCEDURES
(On page 24 of Original **29GA Service Manual**)

Original

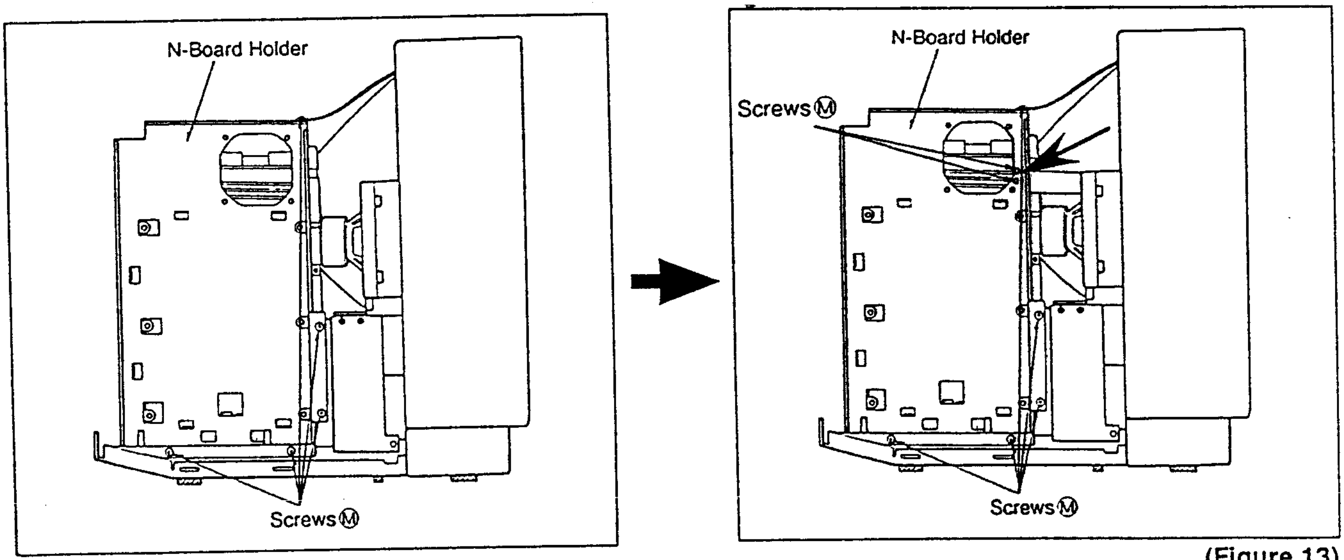
2-11. Removal of the N-Board Holder

1. Remove 5 screws Ⓜ and remove the N-Board Holder as shown in Figure 13.

Modified

2-11. Removal of the N-Board Holder

1. Remove 7 screws Ⓜ and remove the N-Board Holder as shown in Figure 13.


N-Board Holder
Screws Ⓜ
N-Board Holder
Screws Ⓜ
Screws Ⓜ

(Figure 13) (Figure 13)

Figure 3

■ MODIFICATION OF DISASSEMBLY PROCEDURES

(On page 25 of Original **29GA Service Manual**)

Original

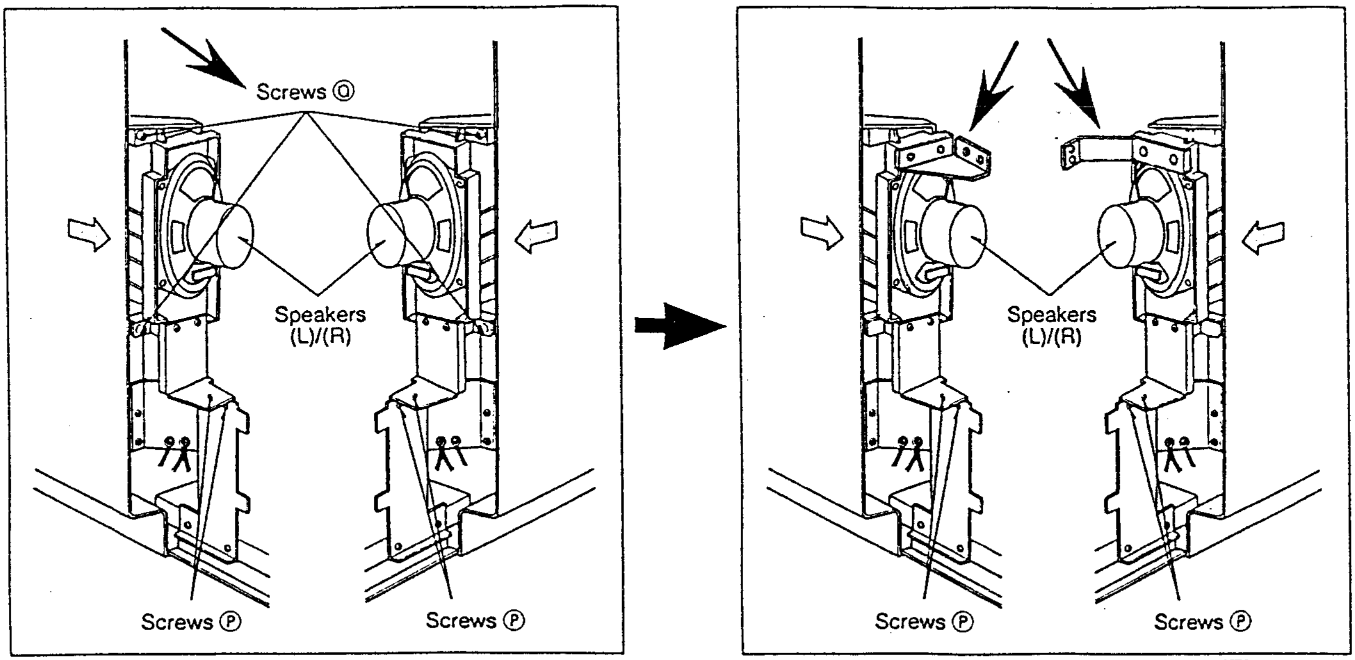
2-14. Removal of the Speakers (L)/(R)

1. Remove 4 screws Ⓟ on the Speaker Holders.
2. Remove 4 screws Ⓞ and Speakers (L)/(R) in the indicated by the arrow as shown in Figure 15.

Modified

2-14. Removal of the Speakers (L)/(R)

1. Remove 4 screws Ⓟ on the Speaker Holders and Speakers (L)/(R) in the indicated by the arrow as shown in Figure 15.


Screws Ⓞ
Speakers (L)/(R)
Screws Ⓟ
Screws Ⓟ
Speakers (L)/(R)
Screws Ⓟ
Screws Ⓟ

(Figure 15) **(Figure 15)**

Figure 4

■ MODIFICATION OF CLAMPING AND WIRING POSITIONS OF INTERNAL LEADS

(On page 28,29 of Original **29GA Service Manual**)

Original Modified

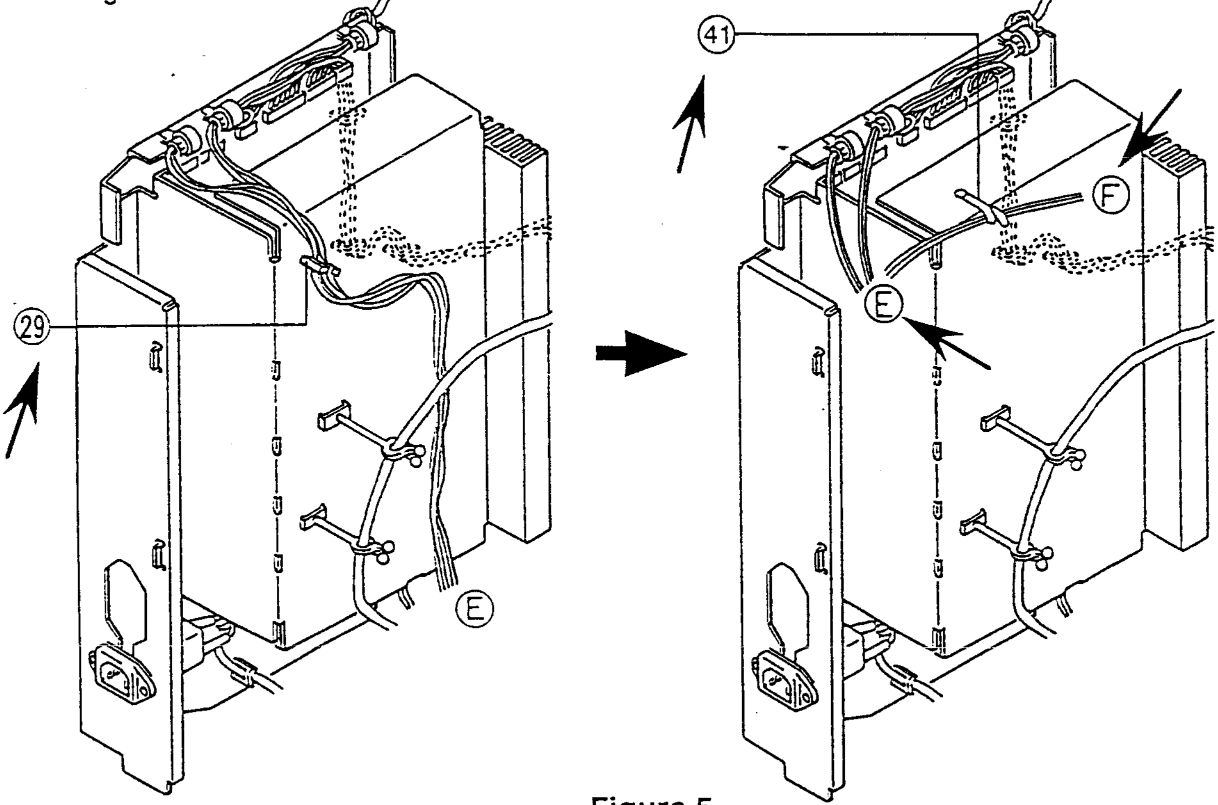
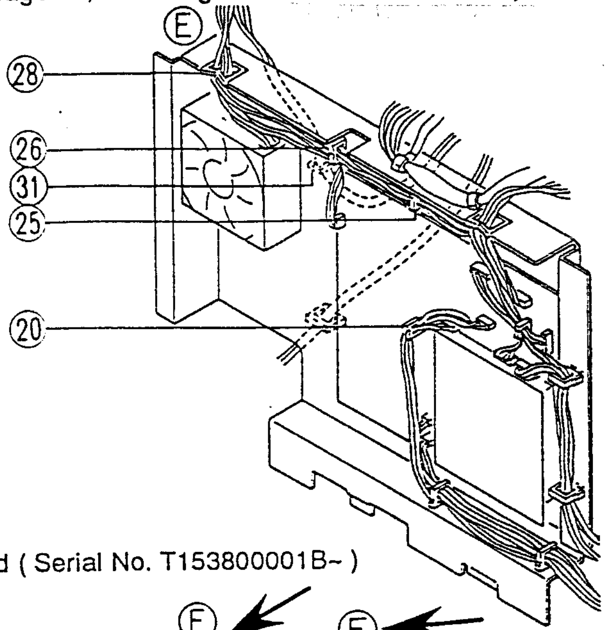


Figure 5

■ MODIFICATION OF CLAMPING AND WIRING POSITIONS OF INTERNAL LEADS

(On page 28,29 of Original **29GA Service Manual)**

Original

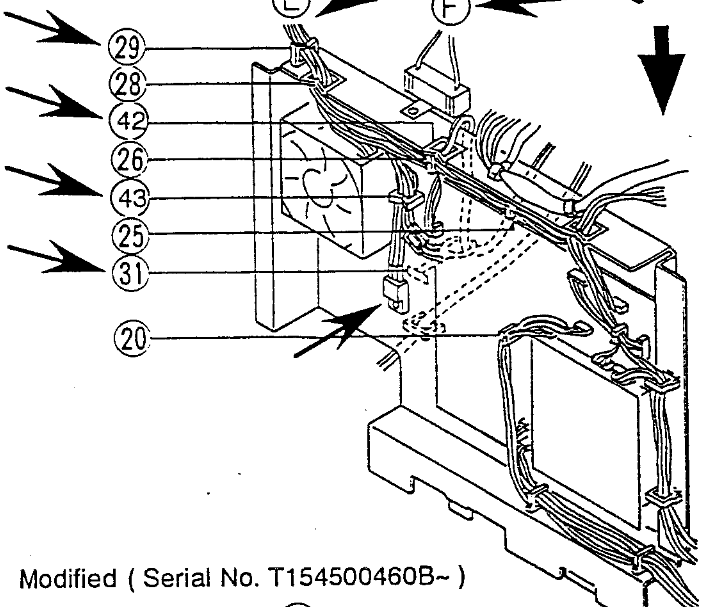


⑳	Two cables: CO-46ED,CO-47ED

㉕	One cable: CO-11BX
㉖	Two cables: CO-11BX,CO-48BD

㉘	Three cables: CO-11BX,CO-15B,CO-48BD
㉙	Four cables: CO-11BX,CO-15B,CO-17BC, CO-48BD

Modified (Serial No. T153800001B~)



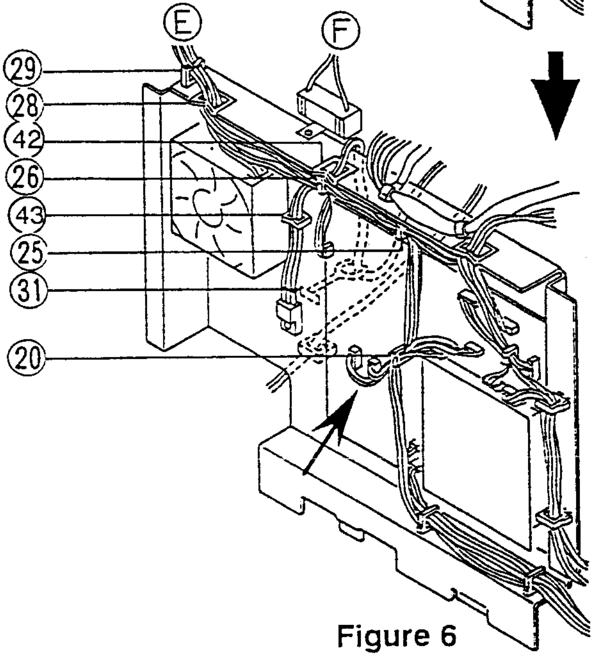
⑳	Two cables: CO-46ED,CO-47ED

㉕	One cable: CO-11BX
㉖	Three cables: CO-11BX,CO-17BC,CO-48BD

㉘	· Four cables: CO-11BX,CO-15B, CO-17BC,CO-48BD · Two leads from R3868
㉙	· Four cables: CO-11BX,CO-15B, CO-17BC,CO-48BD · Two leads from R3868

㊶	Two leads from R3868
㊷	One cable: CO-17BC
㊸	One cable: CO-03T

Modified (Serial No. T154500460B~)



⑳	Four cables: CO-11D,CO-12D,CO-46ED, CO-47ED

㉕	Three cables: CO-11BX,CO-11D,CO-12D
㉖	Five cables: CO-11BX,CO-11D,CO-12D, CO-17BC,CO-48BD

㉘	Five cables: CO-11BX,CO-11D,CO-15B, CO-17BC,CO-48BD
㉙	Five cables: CO-11BX,CO-11D,CO-15B, CO-17BC,CO-48BD

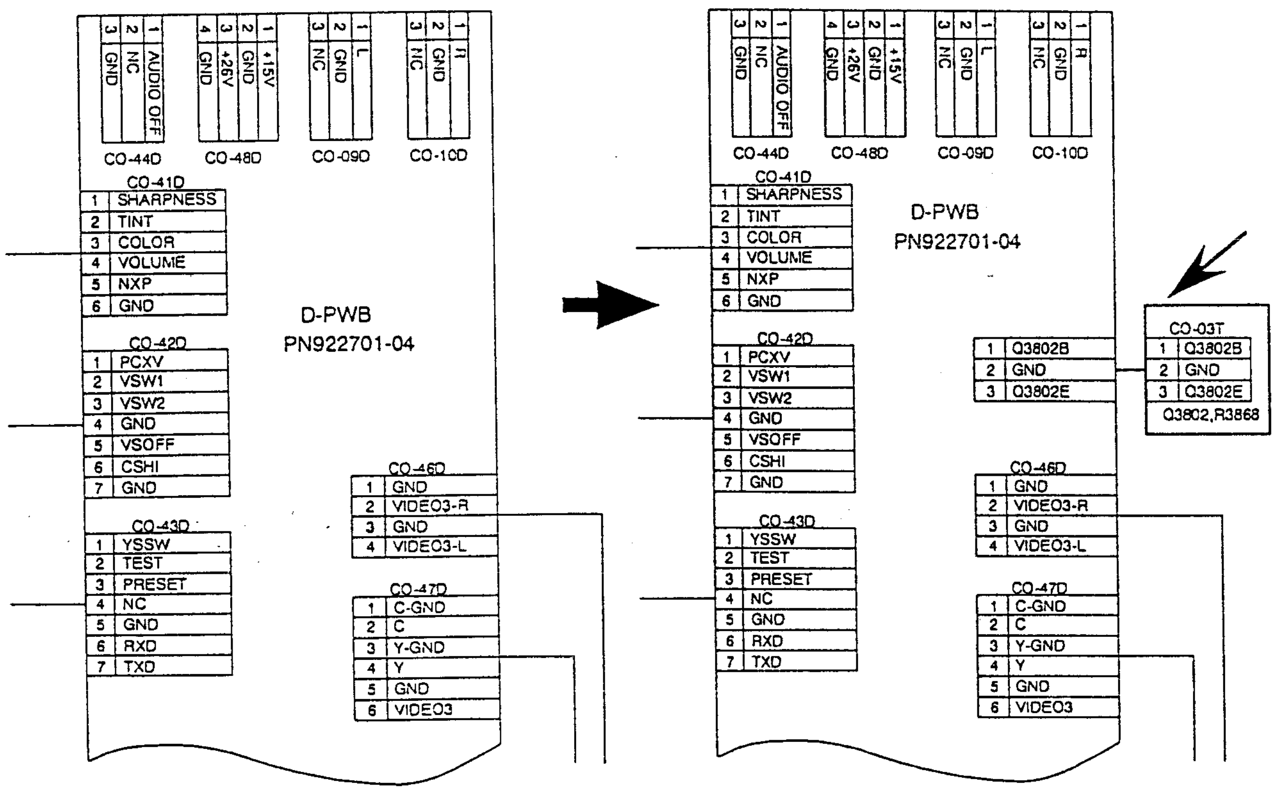
㊶	One cable: CO-11D
㊷	One cable: CO-17BC
㊸	One cable: CO-12D

Figure 6

■ MODIFICATION OF WIRNG DIAGRAM
(On page 40 of Original **29GA Service Manual)**

Original

Modified(Serial No. T153800001B~)


3 GND
2 NC
1 AUDIO OFF
4 GND
3 +26V
2 GND
1 +15V
3 NC
2 GND
1 L
3 NC
2 GND
1 R
CO-44D
CO-48D
CO-09D
CO-10D
CO-41D
1 SHARPNESS
2 TINT
3 COLOR
4 VOLUME
5 NXP
6 GND
D-PWB
PN922701-04
CO-42D
1 PCXV
2 VSW1
3 VSW2
4 GND
5 VSOFF
6 CSHI
7 GND
CO-43D
1 YSSW
2 TEST
3 PRESET
4 NC
5 GND
6 RXD
7 TXD
CO-46D
1 GND
2 VIDEO3-R
3 GND
4 VIDEO3-L
CO-47D
1 C-GND
2 C
3 Y-GND
4 Y
5 GND
6 VIDEO3
1 Q3802B
2 GND
3 Q3802E
CO-03T
1 Q3802B
2 GND
3 Q3802E
Q3802,R3868

Modified(Serial No. T154500460B~)

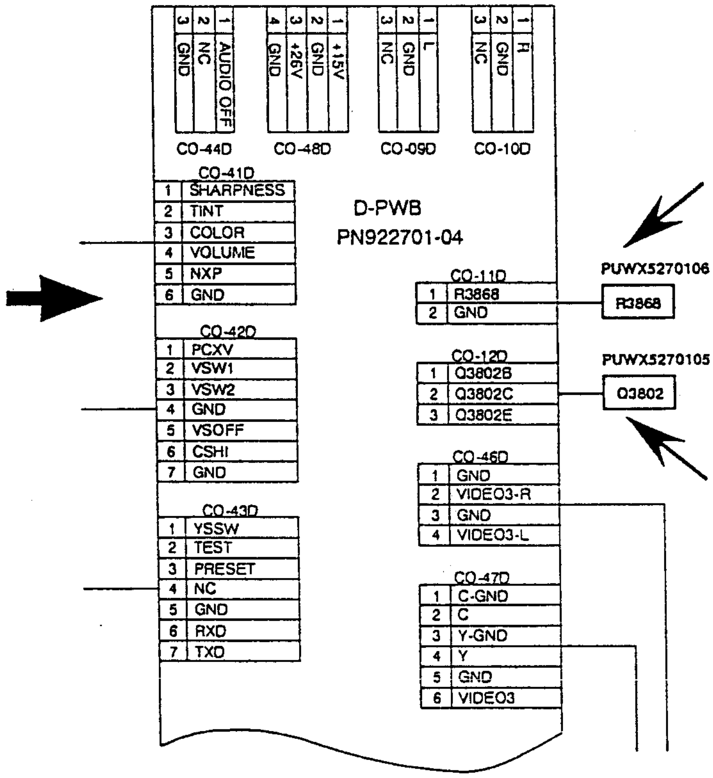

3 GND
2 NC
1 AUDIO OFF
4 GND
3 +26V
2 GND
1 +15V
3 NC
2 GND
1 L
3 NC
2 GND
1 R
CO-44D
CO-48D
CO-09D
CO-10D
CO-41D
1 SHARPNESS
2 TINT
3 COLOR
4 VOLUME
5 NXP
6 GND
D-PWB
PN922701-04
CO-11D
1 R3868
2 GND
PUWX5270106
R3868
CO-12D
1 Q3802B
2 Q3802C
3 Q3802E
PUWX5270105
Q3802
CO-42D
1 PCXV
2 VSW1
3 VSW2
4 GND
5 VSOFF
6 CSHI
7 GND
CO-46D
1 GND
2 VIDEO3-R
3 GND
4 VIDEO3-L
CO-43D
1 YSSW
2 TEST
3 PRESET
4 NC
5 GND
6 RXD
7 TXD
CO-47D
1 C-GND
2 C
3 Y-GND
4 Y
5 GND
6 VIDEO3

Figure 7

■ MODIFICATION OF SCHEMATIC DIAGRAM
(On page 46 of Original **29GA Service Manual)**

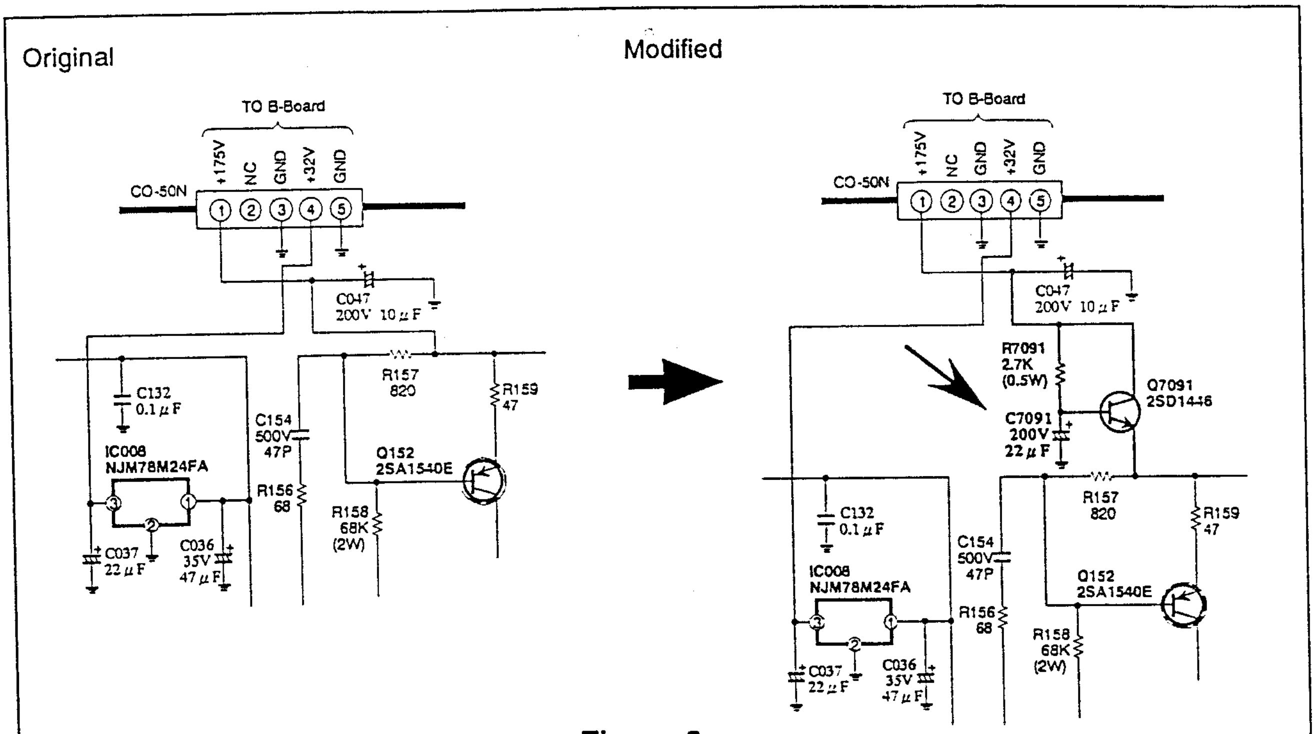

Original
Modified
TO B-Board
+175V
NC
GND
+32V
GND
CO-50N
C047
200V 10μF
C132
0.1μF
IC008
NJM78M24FA
C037
22μF
C036
35V
47μF
C154
500V
47P
R156
68
R157
820
R159
47
Q152
2SA1540E
R158
68K
(2W)
R7091
2.7K
(0.5W)
C7091
200V
22μF
Q7091
2SD1446

Figure 8

■ MODIFICATION OF SCHEMATIC DIAGRAM
(On page 46 of Original **29GA Service Manual)**

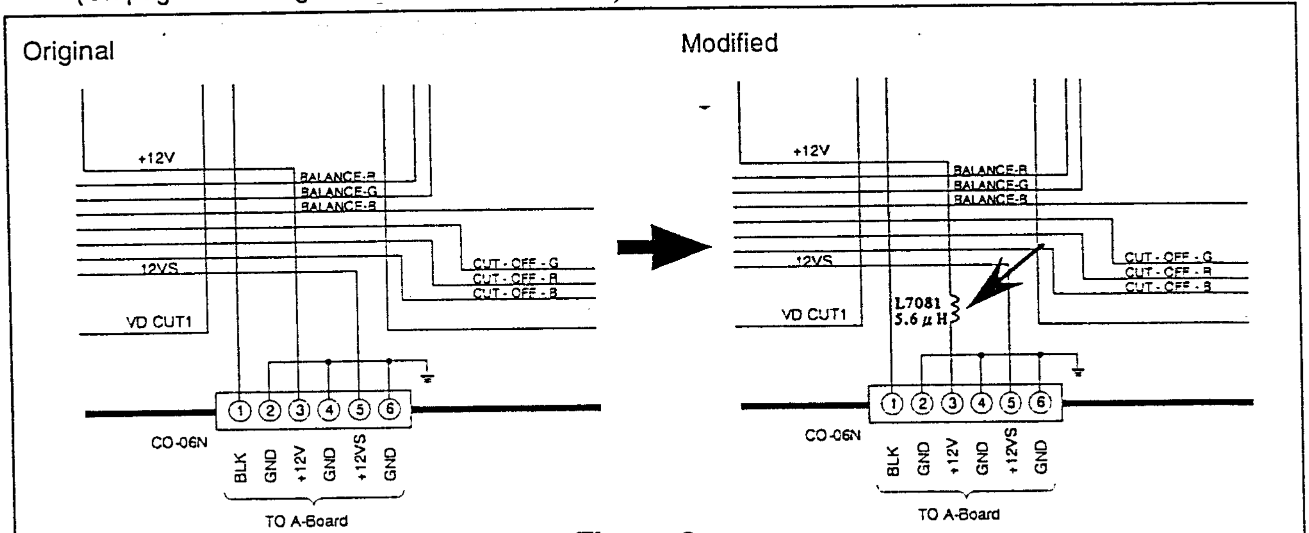

Original
Modified
+12V
BALANCE-R
BALANCE-G
BALANCE-B
12VS
CUT-OFF-G
CUT-OFF-R
CUT-OFF-B
VD CUT1
L7081
5.6μH
CO-06N
BLK
GND
+12V
GND
+12VS
GND
TO A-Board

Figure 9

■ MODIFICATION OF SCHEMATIC DIAGRAM
(On page 47 of Original **29GA Service Manual**)

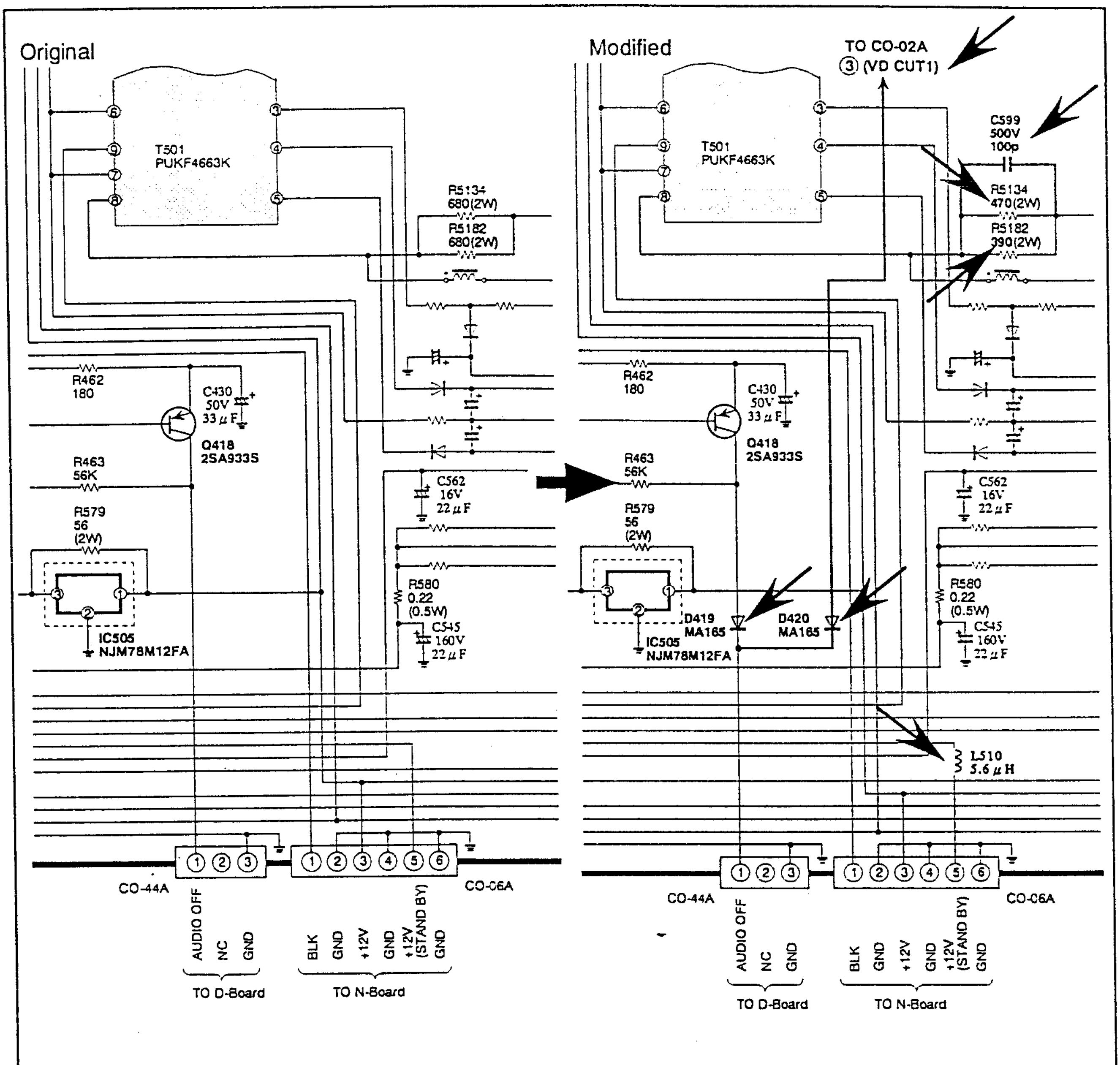
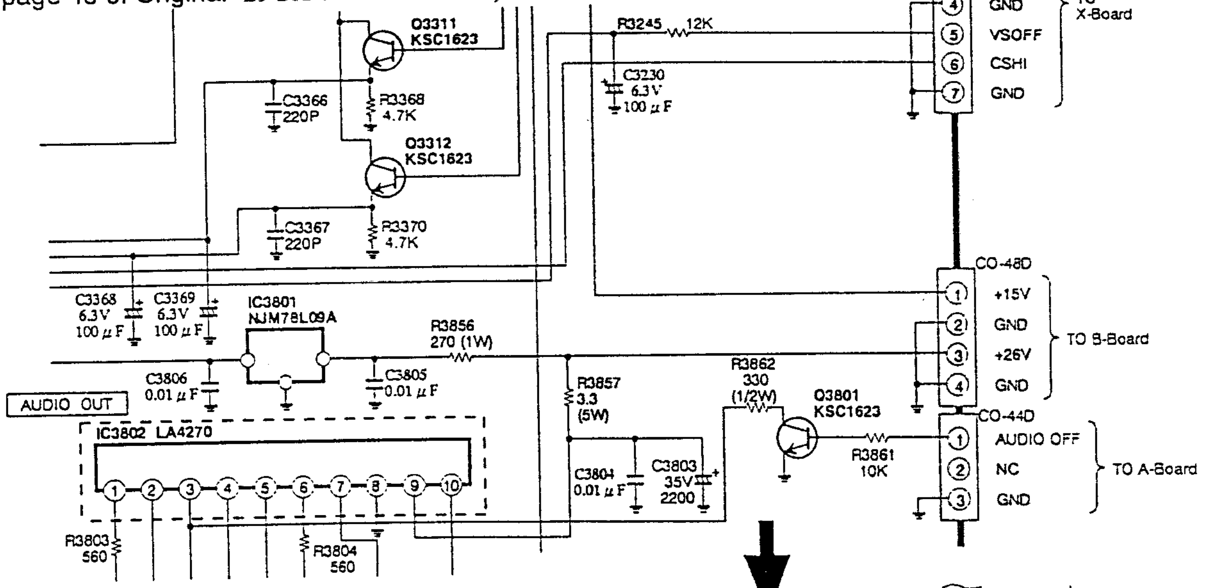

Original
Modified
TO CO-02A
③ (VD CUT1)
T501
PUKF4663K
C599
500V
100p
R5134
680(2W)
R5182
680(2W)
R5134
470(2W)
R5182
390(2W)
R462
180
C430
50V
33µF
Q418
2SA933S
R463
56K
R579
56
(2W)
C562
16V
22µF
R580
0.22
(0.5W)
C545
160V
22µF
IC505
NJM78M12FA
D419
MA165
D420
MA165
L510
5.6µH
CO-44A
CO-06A
AUDIO OFF
NC
GND
BLK
GND
+12V
GND
+12V (STAND BY)
GND
TO D-Board
TO N-Board

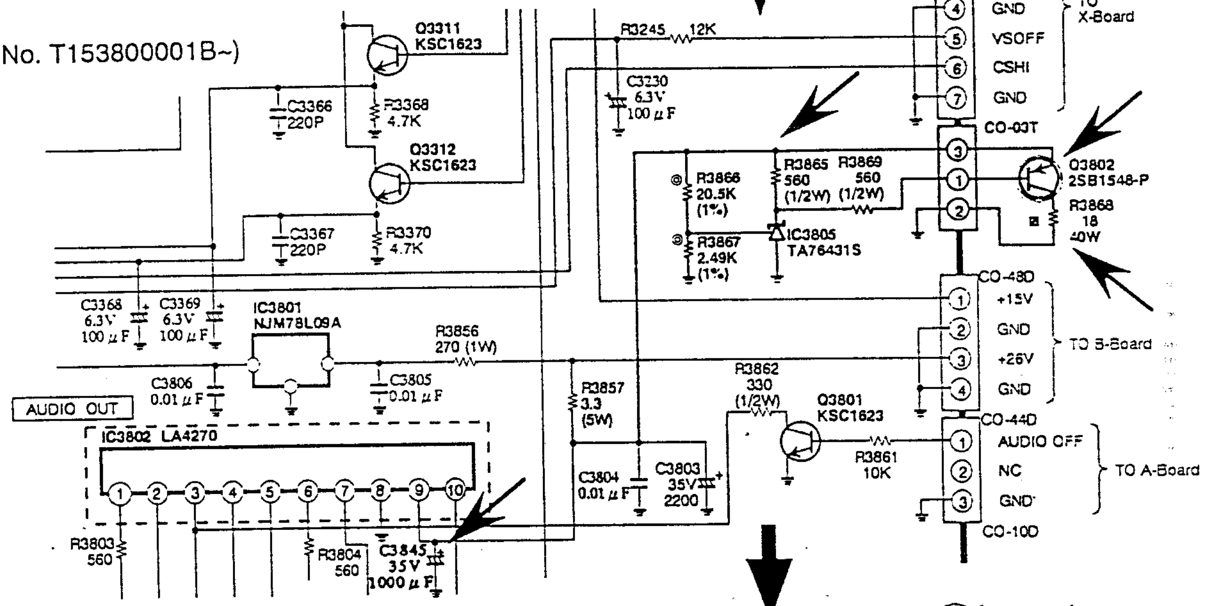
Figure 10

■ MODIFICATION OF SCHEMATIC DIAGRAM
(On page 48 of Original **29GA Service Manual**)

Original


Q3311
KSC1623
Q3312
KSC1623
C3366 220P
R3368 4.7K
C3367 220P
R3370 4.7K
C3368 6.3V 100μF
C3369 6.3V 100μF
IC3801 NJM78L09A
R3856 270 (1W)
C3806 0.01μF
C3805 0.01μF
AUDIO OUT
IC3802 LA4270
1 2 3 4 5 6 7 8 9 10
R3803 560
R3804 560
R3857 3.3 (5W)
C3804 0.01μF
C3803 35V 2200
R3862 330 (1/2W)
Q3801 KSC1623
R3861 10K
R3245 12K
C3230 6.3V 100μF
4 GND
5 VSOFF
6 CSHI
7 GND
TO X-Board
CO-48D
1 +15V
2 GND
3 +26V
4 GND
TO B-Board
CO-44D
1 AUDIO OFF
2 NC
3 GND
TO A-Board

Modified
(Serial No. T153800001B~)


Q3311 KSC1623
Q3312 KSC1623
C3366 220P
R3368 4.7K
C3367 220P
R3370 4.7K
C3368 6.3V 100μF
C3369 6.3V 100μF
IC3801 NJM78L09A
R3856 270 (1W)
C3806 0.01μF
C3805 0.01μF
AUDIO OUT
IC3802 LA4270
1 2 3 4 5 6 7 8 9 10
R3803 560
R3804 560
C3845 35V 1000μF
R3857 3.3 (5W)
C3804 0.01μF
C3803 35V 2200
R3862 330 (1/2W)
Q3801 KSC1623
R3861 10K
R3245 12K
C3230 6.3V 100μF
R3866 20.5K (1%)
R3867 2.49K (1%)
R3865 560 (1/2W)
R3869 560 (1/2W)
IC3805 TA76431S
Q3802 2SB1548-P
R3868 18 40W
4 GND
5 VSOFF
6 CSHI
7 GND
TO X-Board
CO-03T
3 1 2
CO-48D
1 +15V
2 GND
3 +26V
4 GND
TO B-Board
CO-44D
1 AUDIO OFF
2 NC
3 GND
TO A-Board
CO-10D

Modified
(Serial No. T154500460B~)

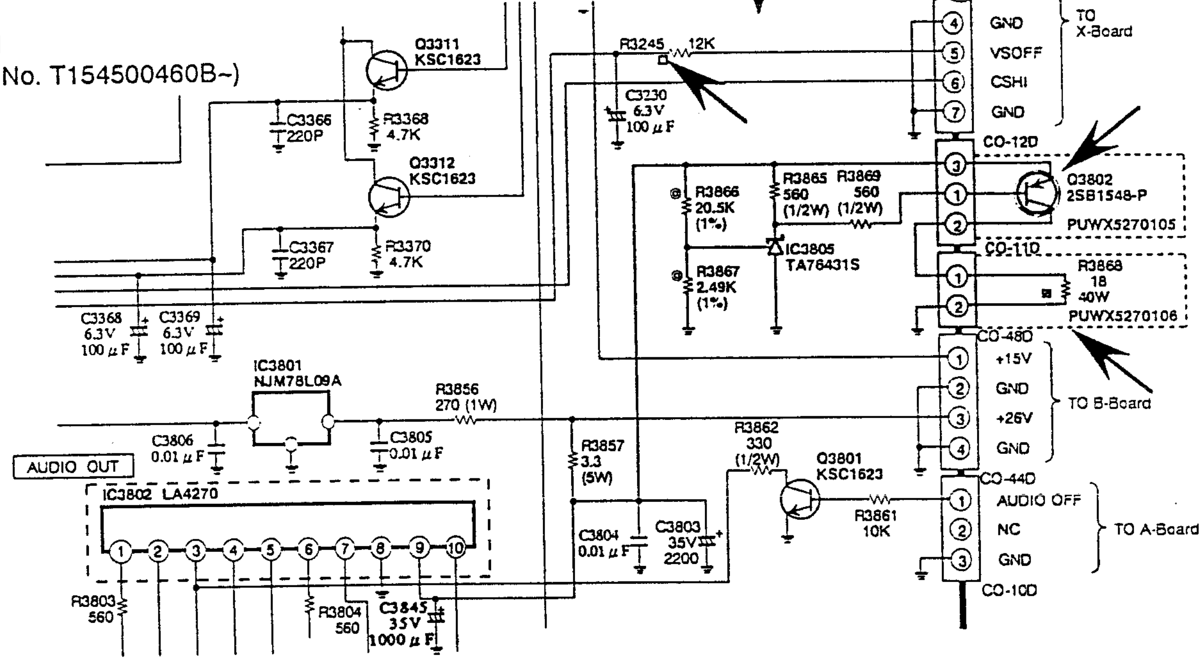
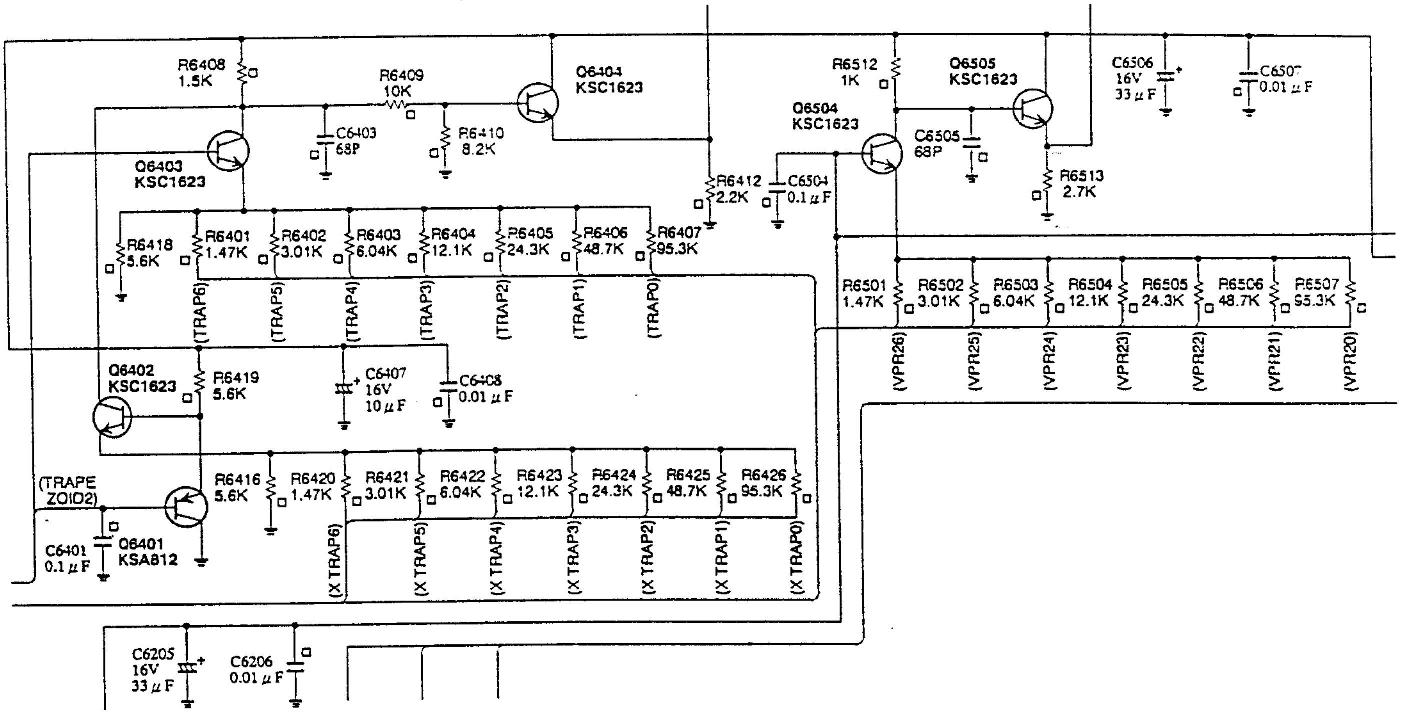

Q3311 KSC1623
Q3312 KSC1623
C3366 220P
R3368 4.7K
C3367 220P
R3370 4.7K
C3368 6.3V 100μF
C3369 6.3V 100μF
IC3801 NJM78L09A
R3856 270 (1W)
C3806 0.01μF
C3805 0.01μF
AUDIO OUT
IC3802 LA4270
1 2 3 4 5 6 7 8 9 10
R3803 560
R3804 560
C3845 35V 1000μF
R3857 3.3 (5W)
C3804 0.01μF
C3803 35V 2200
R3862 330 (1/2W)
Q3801 KSC1623
R3861 10K
R3245 12K
C3230 6.3V 100μF
R3866 20.5K (1%)
R3867 2.49K (1%)
R3865 560 (1/2W)
R3869 560 (1/2W)
IC3805 TA76431S
Q3802 2SB1548-P
PUWX5270105
CO-11D
R3868 18 40W
PUWX5270106
4 GND
5 VSOFF
6 CSHI
7 GND
TO X-Board
CO-12D
CO-48D
1 +15V
2 GND
3 +26V
4 GND
TO B-Board
CO-44D
1 AUDIO OFF
2 NC
3 GND
TO A-Board
CO-10D

Figure 11

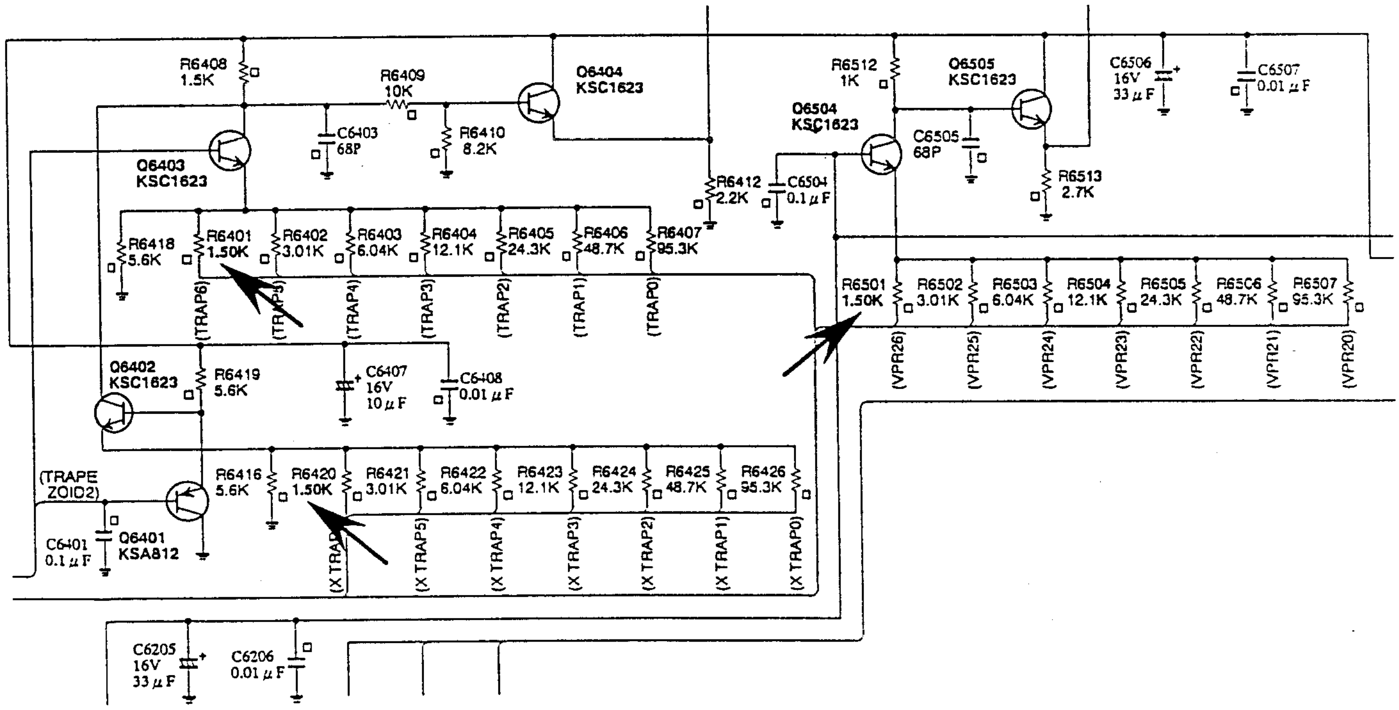
■ MODIFICATION OF SCHEMATIC DIAGRAM
(On page 49 of Original **29GA Service Manual**)

Original



R6408
1.5K
R6409
10K
Q6404
KSC1623
C6403
68P
R6410
8.2K
Q6403
KSC1623
R6412
2.2K
C6504
0.1μF
R6512
1K
Q6505
KSC1623
Q6504
KSC1623
C6505
68P
R6513
2.7K
C6506
16V
33μF
C6507
0.01μF
R6418
5.6K
R6401
1.47K
R6402
3.01K
R6403
6.04K
R6404
12.1K
R6405
24.3K
R6406
48.7K
R6407
95.3K
(TRAP6)
(TRAP5)
(TRAP4)
(TRAP3)
(TRAP2)
(TRAP1)
(TRAP0)
R6501
1.47K
R6502
3.01K
R6503
6.04K
R6504
12.1K
R6505
24.3K
R6506
48.7K
R6507
95.3K
(VPR26)
(VPR25)
(VPR24)
(VPR23)
(VPR22)
(VPR21)
(VPR20)
Q6402
KSC1623
R6419
5.6K
C6407
16V
10μF
C6408
0.01μF
(TRAPEZOID2)
R6416
5.6K
R6420
1.47K
R6421
3.01K
R6422
6.04K
R6423
12.1K
R6424
24.3K
R6425
48.7K
R6426
95.3K
C6401
0.1μF
Q6401
KSA812
(X TRAP6)
(X TRAP5)
(X TRAP4)
(X TRAP3)
(X TRAP2)
(X TRAP1)
(X TRAP0)
C6205
16V
33μF
C6206
0.01μF

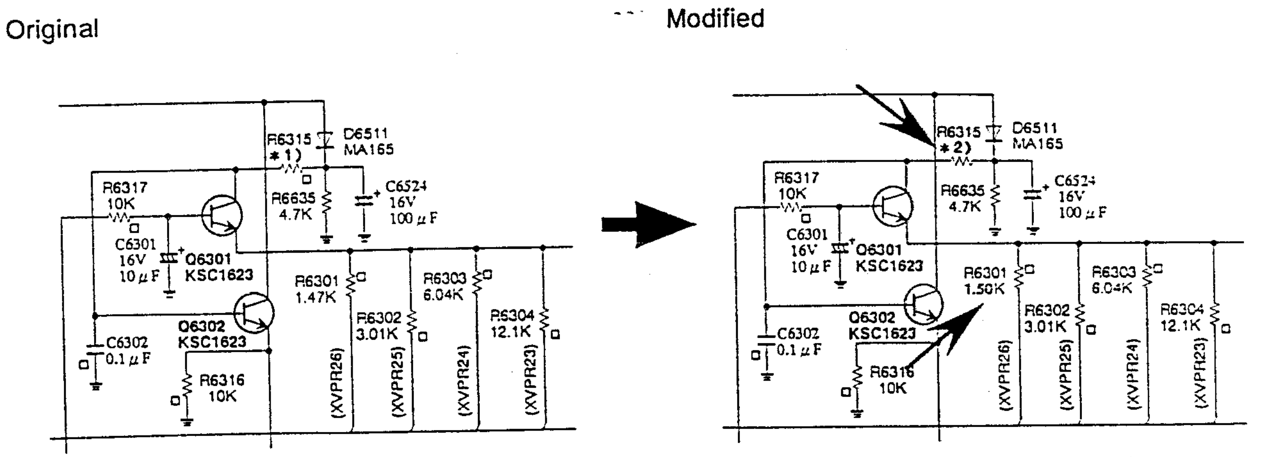
Modified



R6408
1.5K
R6409
10K
Q6404
KSC1623
C6403
68P
R6410
8.2K
Q6403
KSC1623
R6412
2.2K
C6504
0.1μF
R6512
1K
Q6505
KSC1623
Q6504
KSC1623
C6505
68P
R6513
2.7K
C6506
16V
33μF
C6507
0.01μF
R6418
5.6K
R6401
1.50K
R6402
3.01K
R6403
6.04K
R6404
12.1K
R6405
24.3K
R6406
48.7K
R6407
95.3K
(TRAP6)
(TRAP5)
(TRAP4)
(TRAP3)
(TRAP2)
(TRAP1)
(TRAP0)
R6501
1.50K
R6502
3.01K
R6503
6.04K
R6504
12.1K
R6505
24.3K
R6506
48.7K
R6507
95.3K
(VPR26)
(VPR25)
(VPR24)
(VPR23)
(VPR22)
(VPR21)
(VPR20)
Q6402
KSC1623
R6419
5.6K
C6407
16V
10μF
C6408
0.01μF
(TRAPEZOID2)
R6416
5.6K
R6420
1.50K
R6421
3.01K
R6422
6.04K
R6423
12.1K
R6424
24.3K
R6425
48.7K
R6426
95.3K
C6401
0.1μF
Q6401
KSA812
(X TRAP6)
(X TRAP5)
(X TRAP4)
(X TRAP3)
(X TRAP2)
(X TRAP1)
(X TRAP0)
C6205
16V
33μF
C6206
0.01μF

Figure 12

■ MODIFICATION OF SCHEMATIC DIAGRAM
(On page 49 of Original **29GA Service Manual**)


Original
Modified
R6315
*1)
D6511
MA165
R6317
10K
R6635
4.7K
C6524
16V
100 μF
C6301
16V
10 μF
Q6301
KSC1623
R6301
1.47K
R6303
6.04K
Q6302
KSC1623
R6302
3.01K
R6304
12.1K
C6302
0.1 μF
R6316
10K
(XVPR26)
(XVPR25)
(XVPR24)
(XVPR23)
R6315
*2)
D6511
MA165
R6317
10K
R6635
4.7K
C6524
16V
100 μF
C6301
16V
10 μF
Q6301
KSC1623
R6301
1.50K
R6303
6.04K
Q6302
KSC1623
R6302
3.01K
R6304
12.1K
C6302
0.1 μF
R6316
10K
(XVPR26)
(XVPR25)
(XVPR24)
(XVPR23)

* 1) The DY label blue : R6315 = 120 Ω
The DY label white : R6315 = 200 Ω

* 2) The DY label blue : R6315 = 100 Ω
The DY label white : R6315 = 180 Ω

Figure 13

■ MODIFICATION OF EXPLODED VIEWS
(On page 50 of Original **29GA Service Manual**)

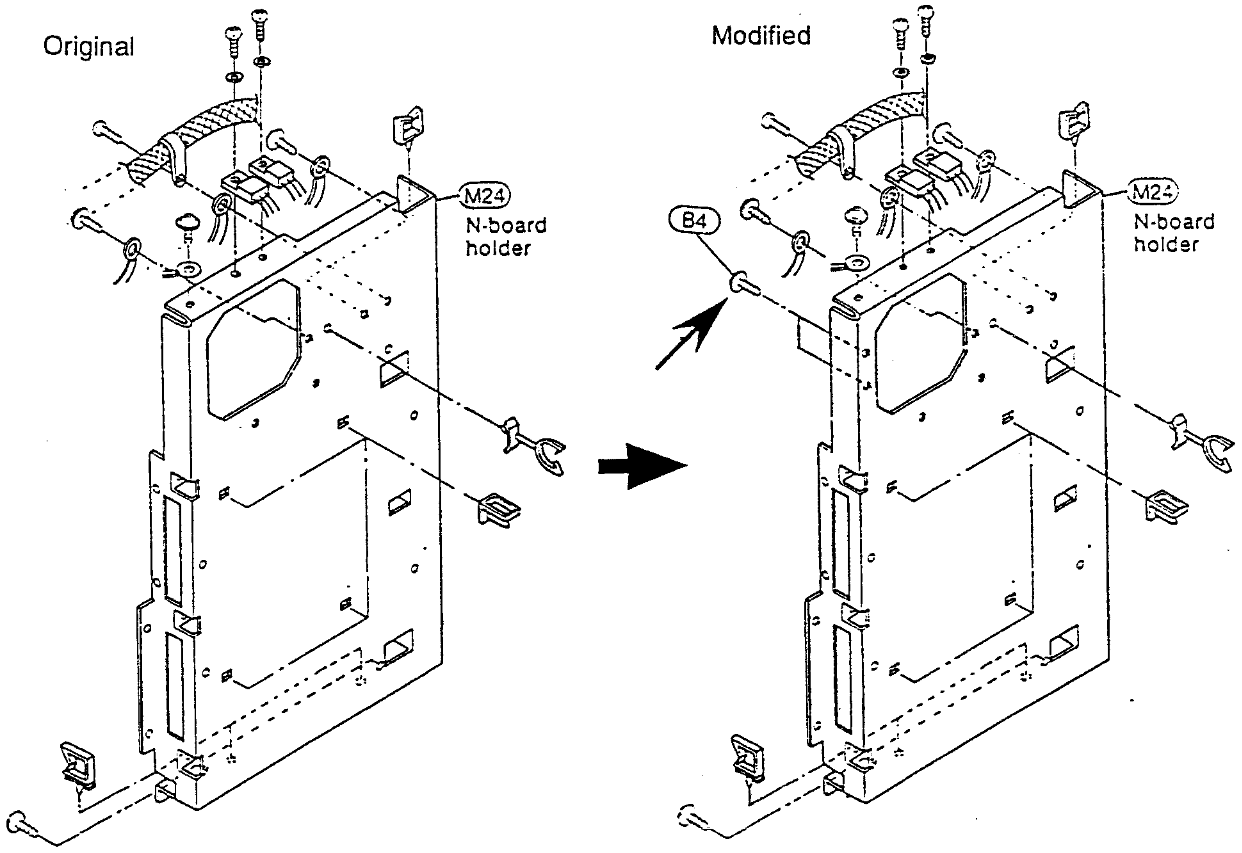
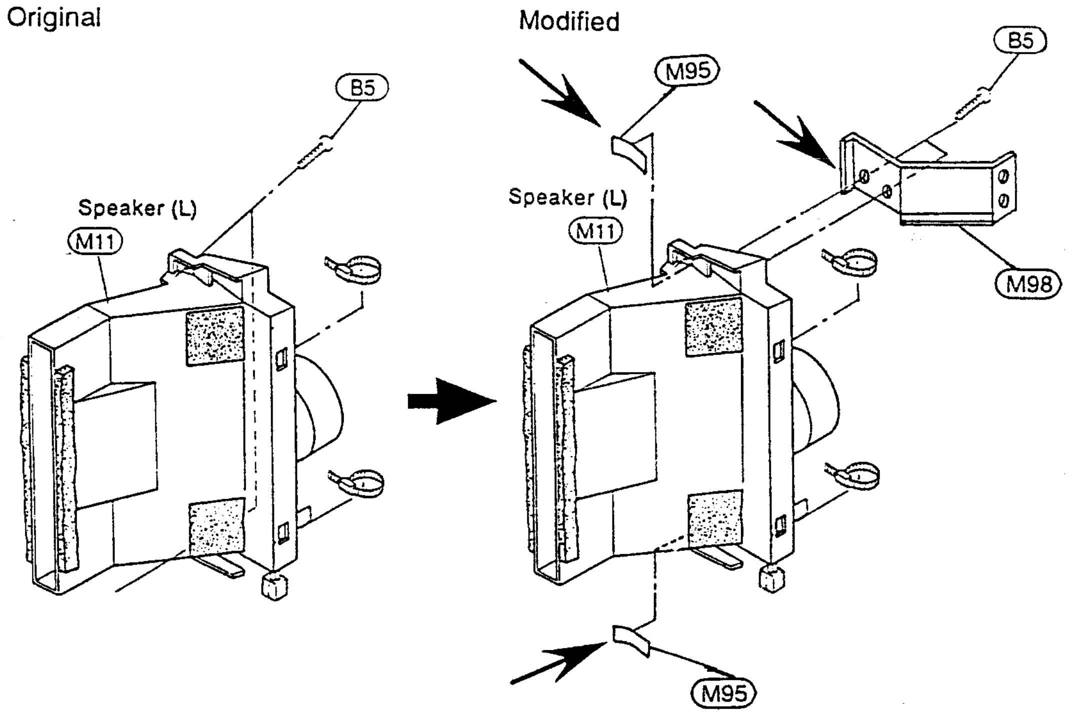

Original
M24
N-board holder
Modified
B4
M24
N-board holder

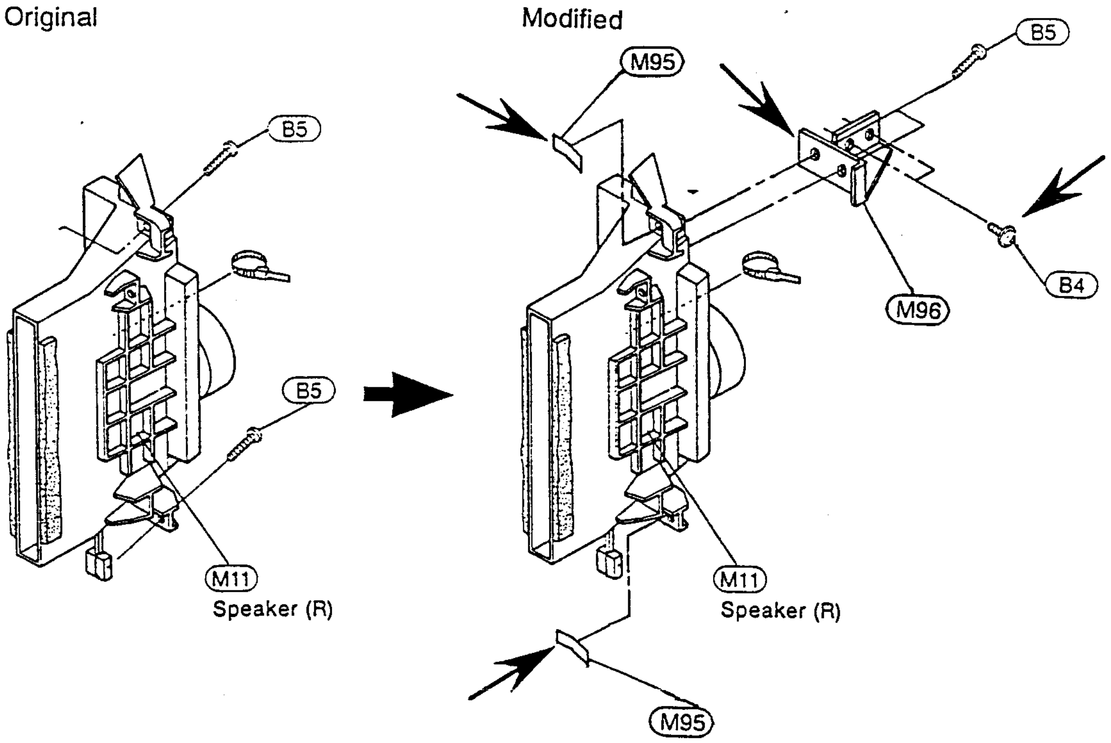
Figure 14

■ MODIFICATION OF EXPLODED VIEWS
(On page 50 of Original **29GA Service Manual**)


Original

Modified
B5
Speaker (L)
M11
M95
B5
Speaker (L)
M11
M98
M95

Figure 15


Original

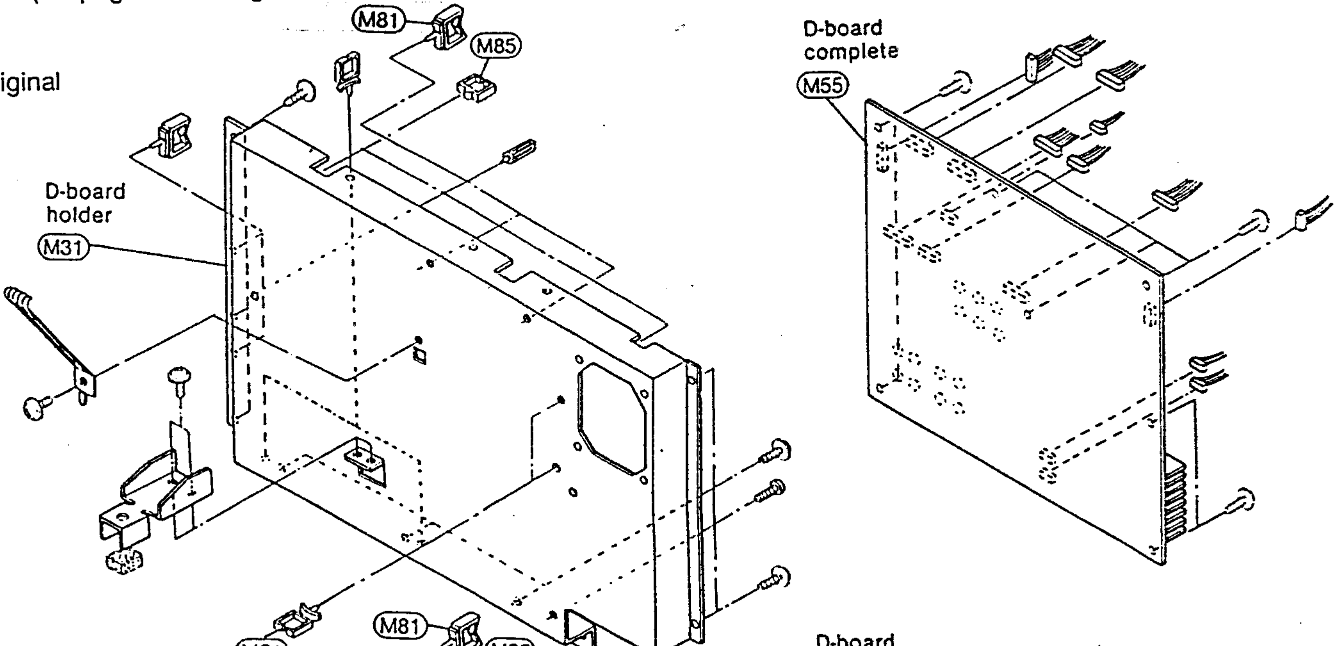
Modified
B5
B5
M11
Speaker (R)
M95
B5
M96
B4
M11
Speaker (R)
M95

Figure 16

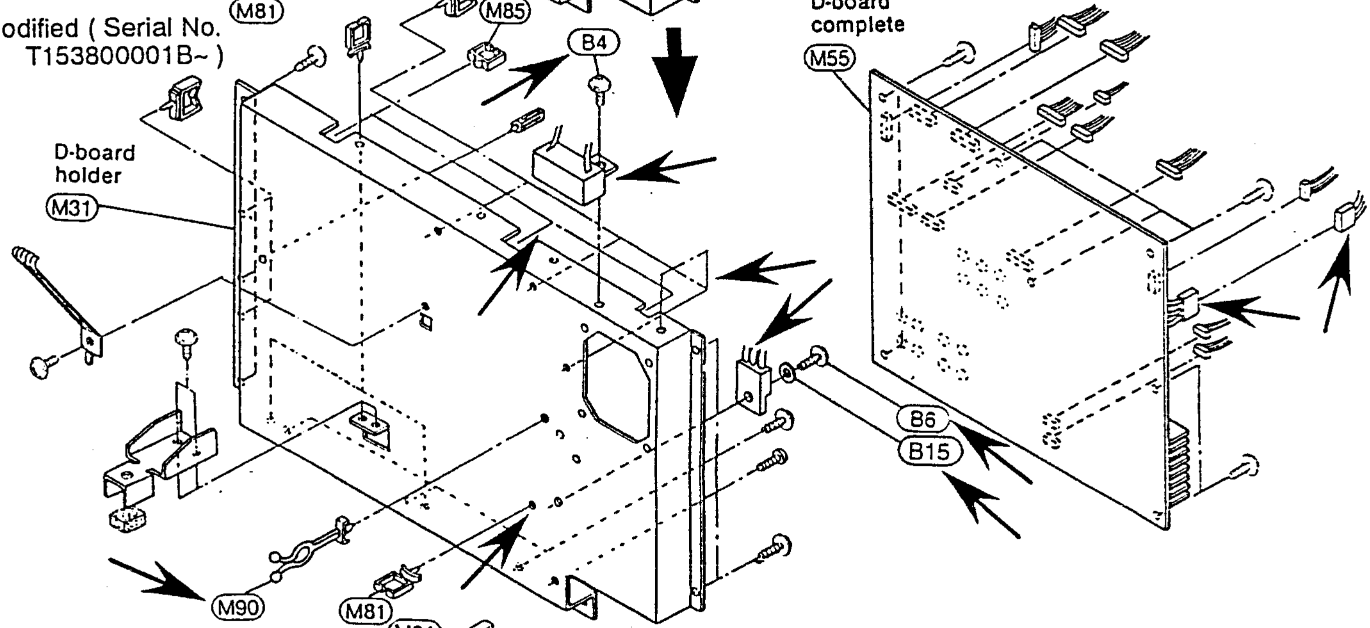
■ MODIFICATION OF EXPLODED VIEWS

(On page 50 of Original **29GA Service Manual**)

Original


M81
M85
D-board complete
M55
D-board holder
M31
M81

Modified (Serial No. T153800001B~)


M81
M85
B4
D-board complete
M55
D-board holder
M31
B6
B15
M90
M81

Modified (Serial No. T154500460B~)

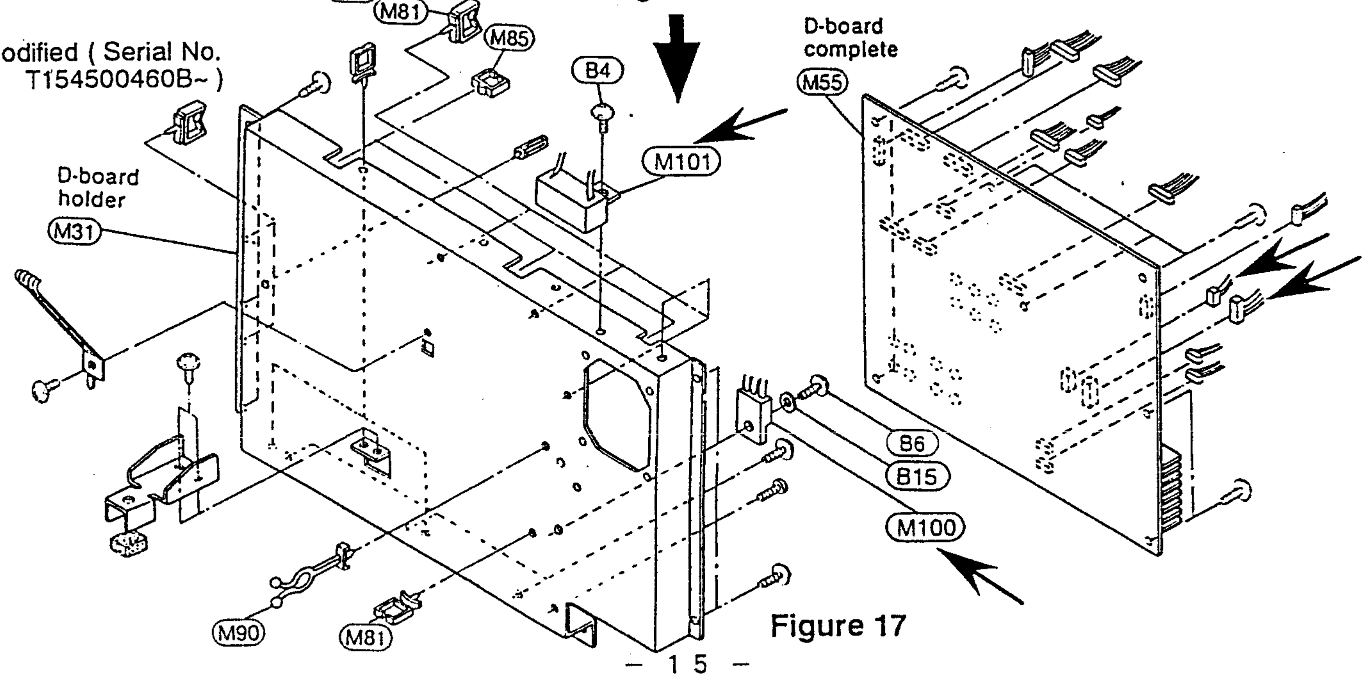
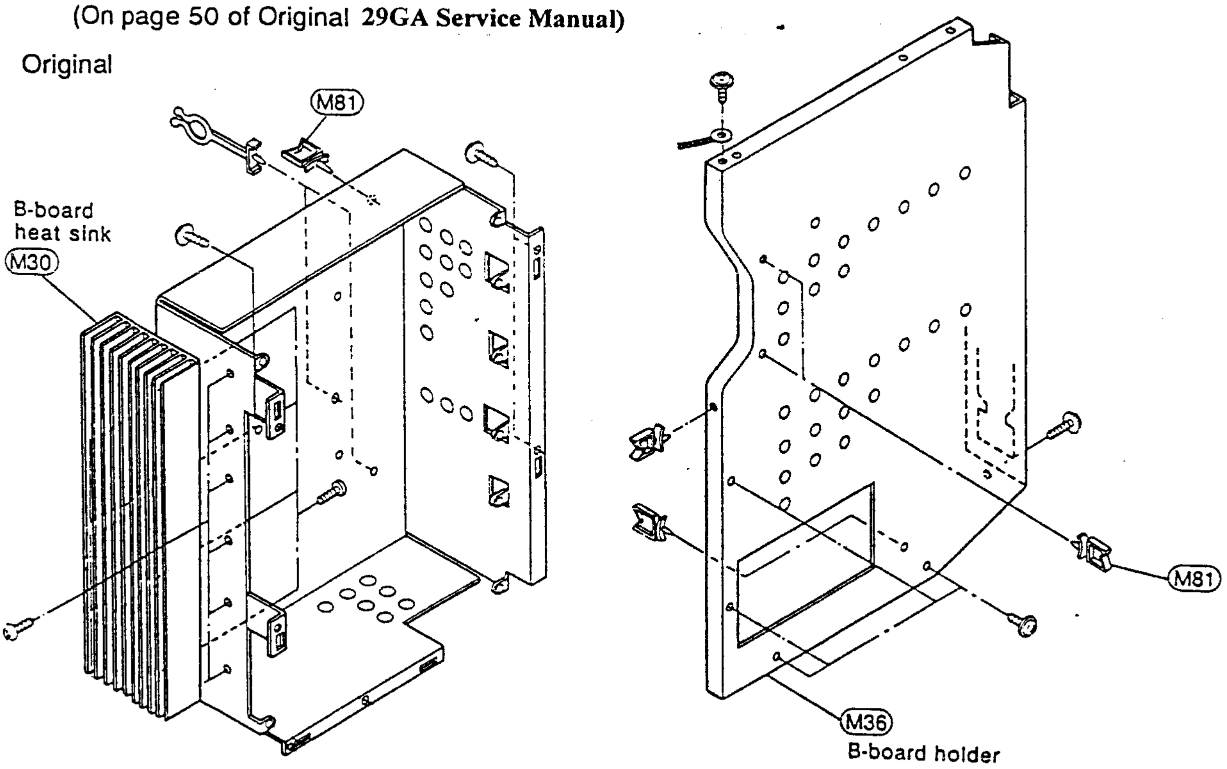

M81
M85
B4
M101
D-board complete
M55
D-board holder
M31
B6
B15
M100
M90
M81

Figure 17

■ MODIFICATION OF EXPLODED VIEWS

(On page 50 of Original **29GA Service Manual**)

Original


M81
B-board heat sink
M30
M81
M36
B-board holder

Modified

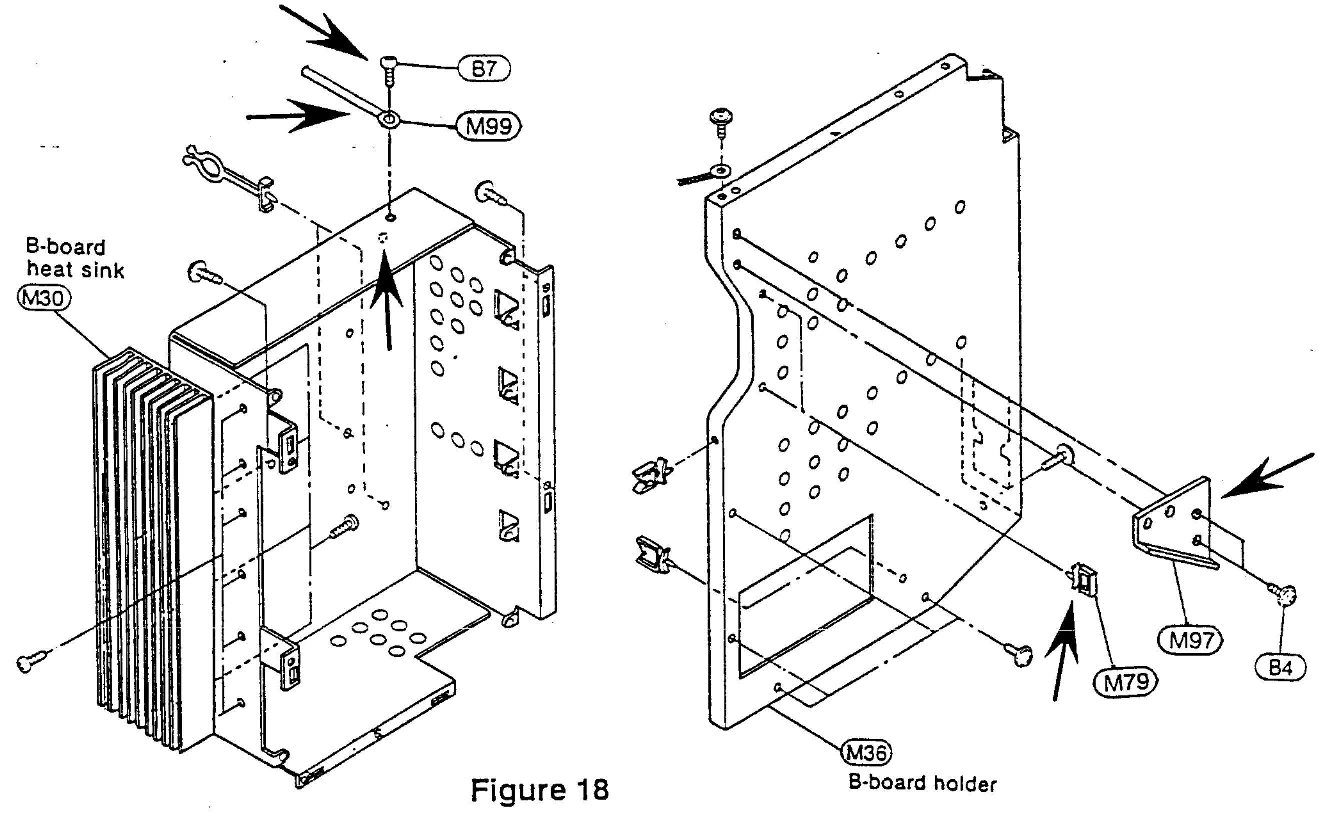

B7
M99
B-board heat sink
M30
M79
M97
B4
M36
B-board holder

Figure 18

Service Manual

Supplement - 4

ViewSonic 29GA

Model No. 2964GA-1

Please file and use this supplement manual together with the service manual for Model No. 2964GA-1.

IMPORTANT

Subject ... This change has been introduced to improve reliability.

■ REPLACEMENT PARTS LIST

Interchangeability Code		See the Code column on the following parts number list.
Parts	Set Production	
A Original New	Early Late	Original or new parts may be used in early or late production sets. Use original parts until exhausted , then stock new parts.
B Original New	Early Late	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts where possible , then stock new parts.
C Original New	Early Late	New parts only may be used in early or late production sets. Stock new parts.
D Original New	Early Late	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.

E Addition	F Deletion	G Correction	H Change the number of parts per set

Page	Ref. No.	Part No.		Part Name and Description	Per Set	Remarks	Code	Figure
		Original	New					
51	M50	PUN92701H-J	PUN92964H-J	H-Board Complete (RTL)	1	*1	G	
51	M52	PUN92701X-J	PUN92964X-J	X-Board Complete (RTL)	1	*2	D	
51	M53	PUN92701N-J	PUN92964N-J	N-Board Complete (RTL)	1	*2	D	
67	R980	——	ERDS2TJ103	C 10K J 1/4W	1	*1	G	2
67	C933	KCEA2GU220E	KCA2GHG680E	E 68 400V	1	*1	G	2
67	C939	——	KCEA1HU2R2E	E 2.2 50V	1	*1	G	2
67	C940	——	ECCW1H121J	C 120p J 50V	1	*1	G	2
68	D926	RD24ESAB2	RD24ESAB1	Zener Diode (Vz=24V)	1	*1	G	2
68	D933	——	MA165	Diode	1	*1	G	2
68	Q925	——	PUWX5270107	Transistor Assembly (RTL)	1	*1	G	2
69	R7034	ERJ6GEYJ472	ERJ6GEYJ222	C 2.2K J 1/10W	1	*2	D	3
70	C7008	KCEA1HU3R3E	KCEA1CU100E	E 10 16V	1	*2	D	3
70	C7032	ECUX1H471KBN	——	C 470p K 50V	1	*2	F	3
71	D7031	MA152WK	T3A206	Jumper Lead	1	*2	F	3
73	R6141	ERJ6GEYJ101	ERJ6GEYJ102	C 1.0K J 1/10W	1	*2	D	5
75	R6641	——	PUWX5270109	Resistor Assembly (RTL)	1	*2	E	4
76	C6601	——	KCEA1CU100	E 10 16V	1	*2	E	5
77	Q6601	——	PUWX5270108	FET Assembly (RTL)	1	*2	E	4

NOTE: Parts with mark *1 have been replaced at the same time. (Production sets Serial No. T153800001B~

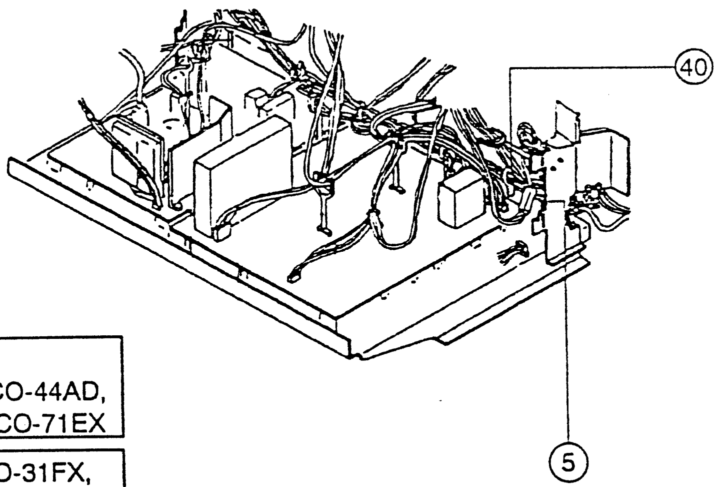
Parts with mark *2 have been replaced at the same time. (Production sets Serial No. T153800131B~

If X-Board or N-Board Complete must be change into new part , please change both Board into new Parts .

ViewSonic

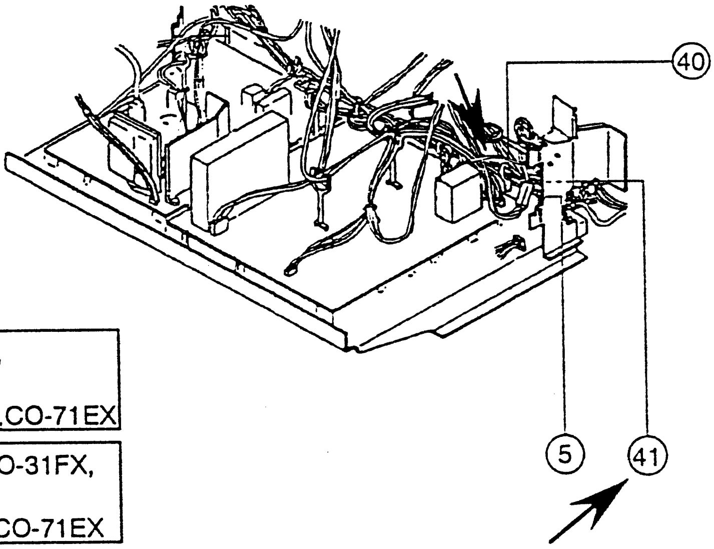
MODIFICATION OF CLAMPING AND WIRING POSITIONS OF INTERNAL LEADS

(On page 28 of Original **29GA Service Manual)**



⑤	Eight cables : CO-06AN,CO-31FX, CO-32FX,CO-33FX,CO-44AD, CO-50BN,CO-55HN.CO-71EX

㊵	Nine cables : CO-06AN,CO-10D,CO-31FX, CO-32FX,CO-33FX,CO-44AD, CO-50BN,CO-55HN.CO-71EX



⑤	Seven cables : CO-06AN,CO-31FX, CO-32FX,CO-33FX, CO-50BN,CO-55HN.CO-71EX

㊵	Eight cables : CO-06AN,CO-10D,CO-31FX, CO-32FX,CO-33FX, CO-50BN,CO-55HN.CO-71EX

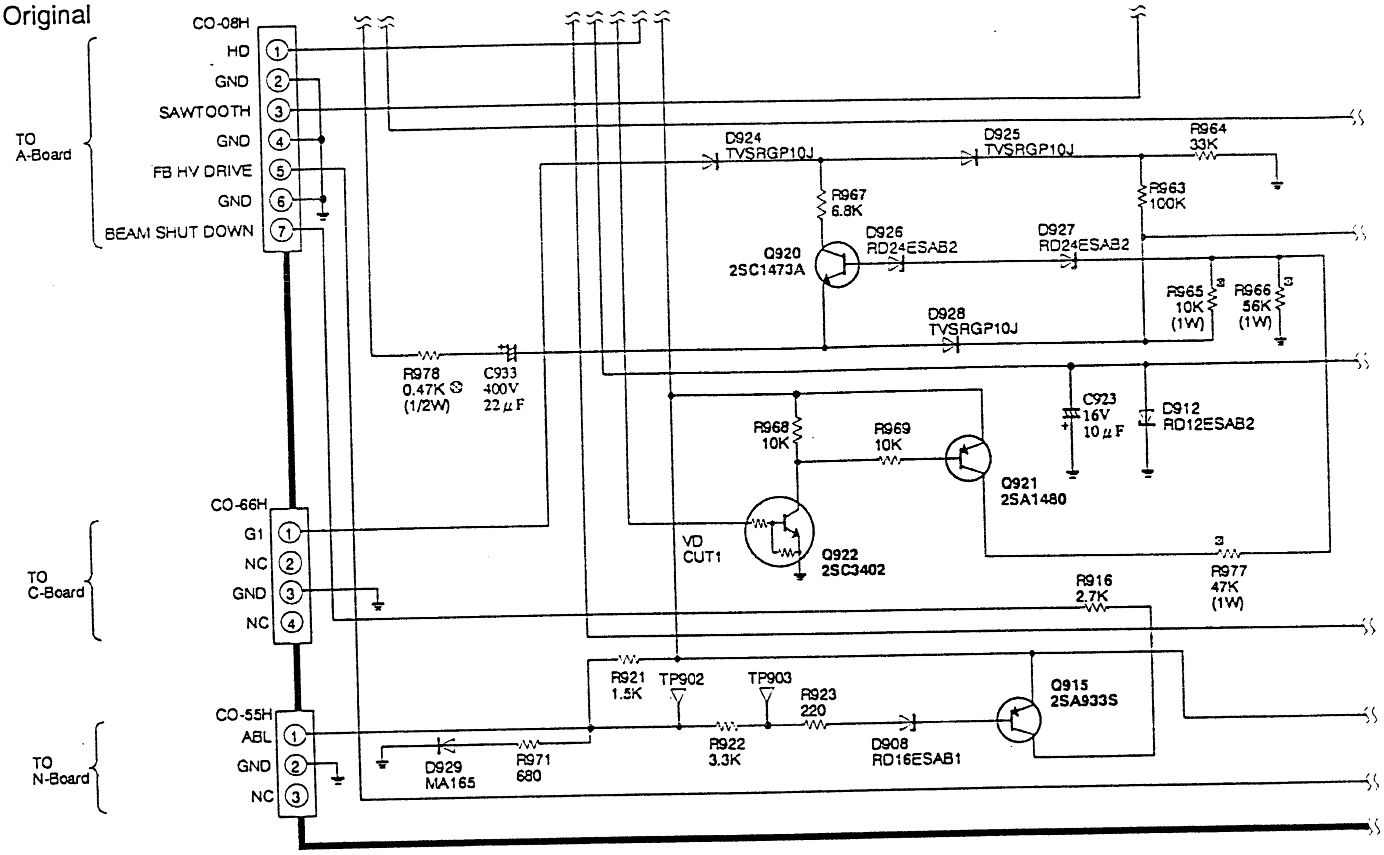
㊶	Eight cables : CO-06AN,CO-31FX, CO-32FX,CO-33FX,CO-44AD, CO-50BN,CO-55HN.CO-71EX

Figure 1

■ MODIFICATION OF SCHEMATIC DIAGRAM
(On page 44 of Original **29GA Service Manual**)

H-Board

Original


CO-08H
HD ①
GND ②
SAWTOOTH ③
GND ④
FB HV DRIVE ⑤
GND ⑥
BEAM SHUT DOWN ⑦
TO A-Board
D924 TVSRGP10J
D925 TVSRGP10J
R964 33K
R967 6.8K
R963 100K
Q920 2SC1473A
D926 RD24ESAB2
D927 RD24ESAB2
R965 10K (1W)
R966 56K (1W)
D928 TVSRGP10J
R978 0.47K (1/2W)
C933 400V 22µF
C923 16V 10µF
D912 RD12ESAB2
R968 10K
R969 10K
Q921 2SA1480
CO-66H
G1 ①
NC ②
GND ③
NC ④
TO C-Board
VD CUT1
Q922 2SC3402
R916 2.7K
R977 47K (1W)
R921 1.5K
TP902
TP903
R923 220
Q915 2SA933S
CO-55H
ABL ①
GND ②
NC ③
TO N-Board
D929 MA165
R971 680
R922 3.3K
D908 RD16ESAB1

Modified

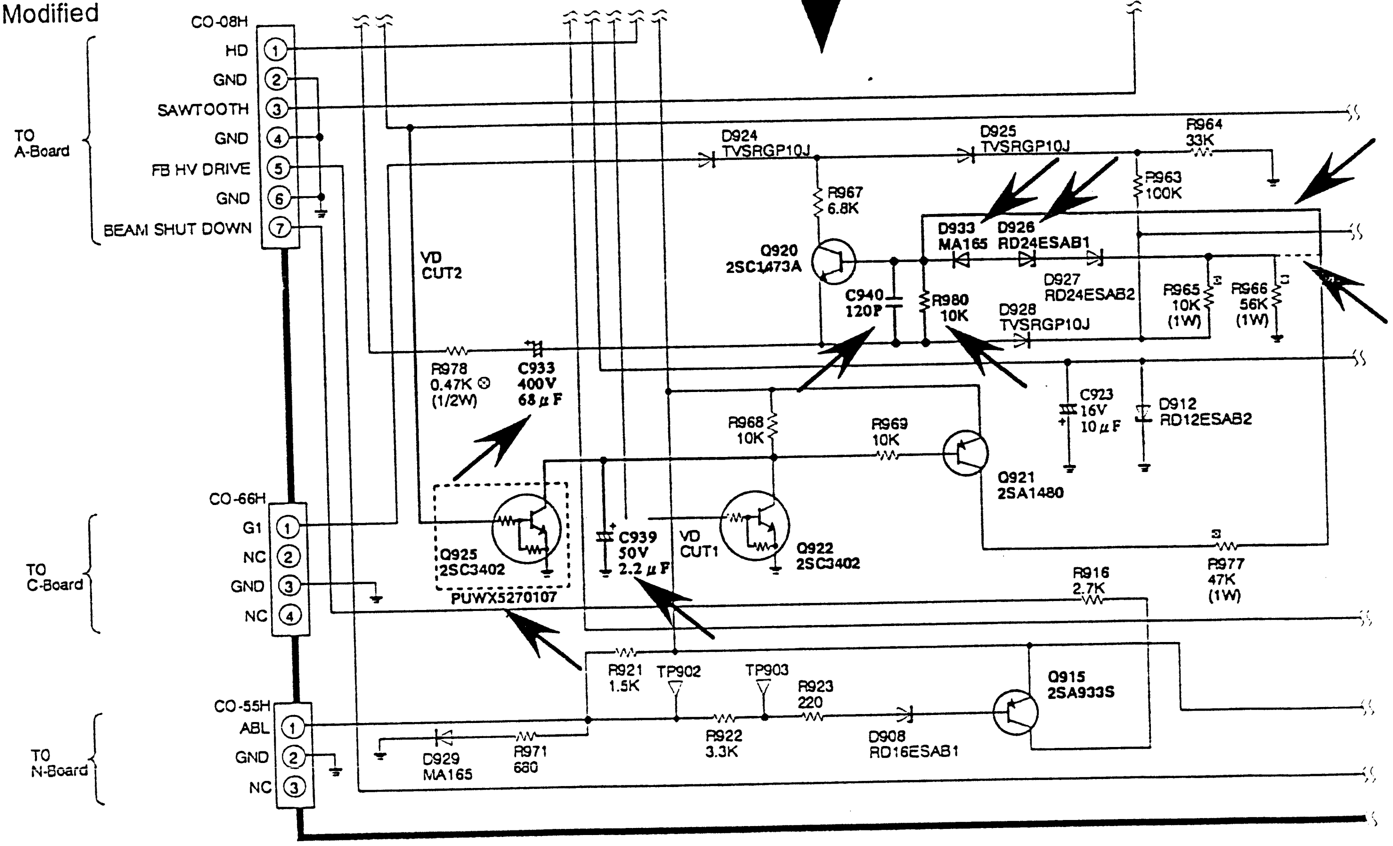
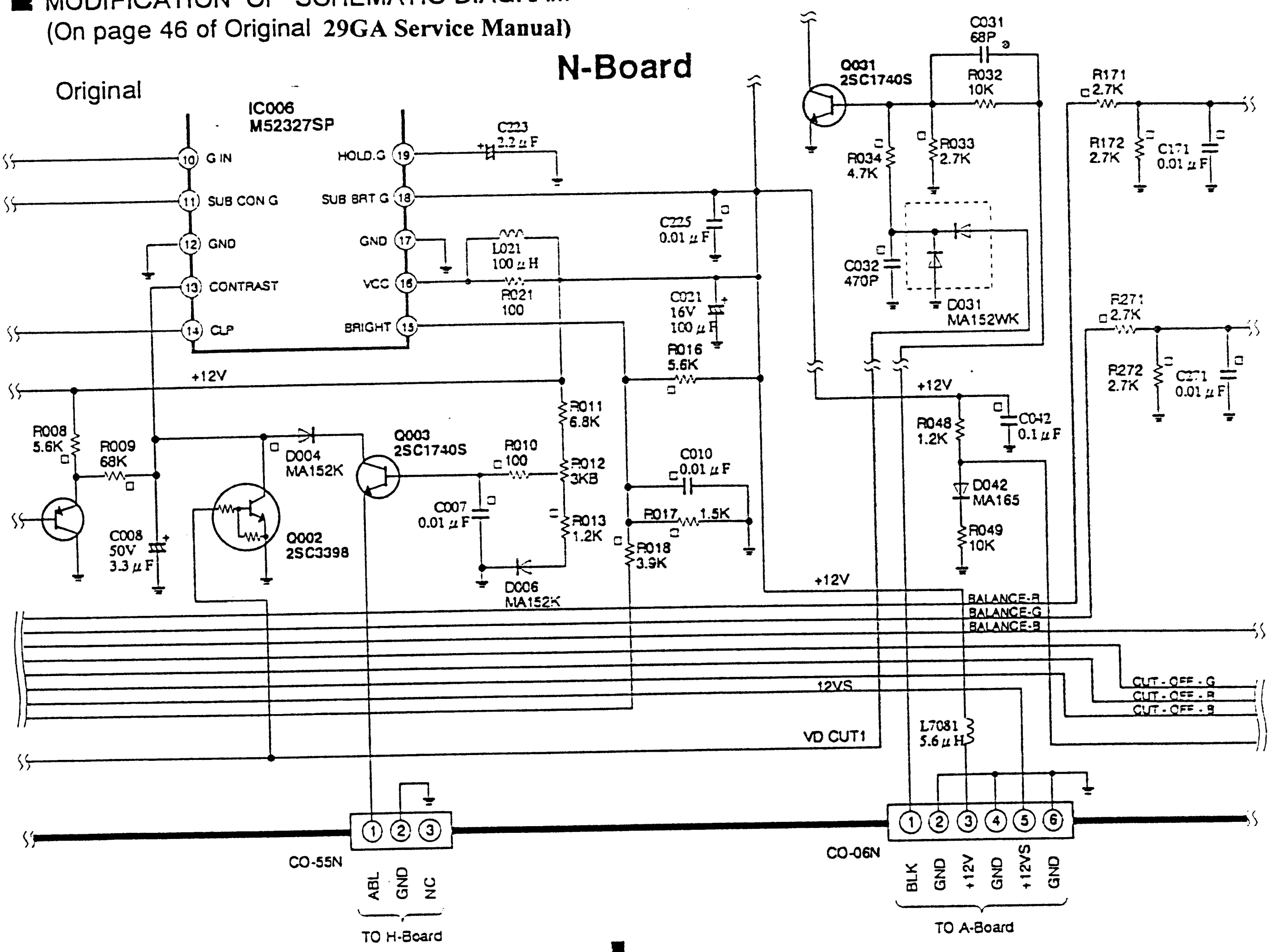

CO-08H
HD ①
GND ②
SAWTOOTH ③
GND ④
FB HV DRIVE ⑤
GND ⑥
BEAM SHUT DOWN ⑦
TO A-Board
VD CUT2
D924 TVSRGP10J
D925 TVSRGP10J
R964 33K
R967 6.8K
R963 100K
D933 MA165
D926 RD24ESAB1
Q920 2SC1473A
C940 120P
R980 10K
D927 RD24ESAB2
D928 TVSRGP10J
R965 10K (1W)
R966 56K (1W)
R978 0.47K (1/2W)
C933 400V 68µF
C923 16V 10µF
D912 RD12ESAB2
R968 10K
R969 10K
Q921 2SA1480
CO-66H
G1 ①
NC ②
GND ③
NC ④
TO C-Board
Q925 2SC3402
PUWX5270107
C939 50V 2.2µF
VD CUT1
Q922 2SC3402
R916 2.7K
R977 47K (1W)
R921 1.5K
TP902
TP903
R923 220
Q915 2SA933S
CO-55H
ABL ①
GND ②
NC ③
TO N-Board
D929 MA165
R971 680
R922 3.3K
D908 RD16ESAB1

Figure 2

■ MODIFICATION OF SCHEMATIC DIAGRAM
(On page 46 of Original **29GA Service Manual**)

N-Board

Original


IC006
M52327SP
10 G IN
11 SUB CON G
12 GND
13 CONTRAST
14 CLP
HOLD.G 19
SUB BRT G 18
GND 17
VCC 16
BRIGHT 15
C223 2.2 μF
C225 0.01 μF
L021 100 μH
R021 100
C021 16V 100 μF
R016 5.6K
+12V
R008 5.6K
R009 68K
C008 50V 3.3 μF
D004 MA152K
Q002 2SC3398
Q003 2SC1740S
R010 100
C007 0.01 μF
R011 6.8K
R012 3KB
R013 1.2K
D006 MA152K
C010 0.01 μF
R017 1.5K
R018 3.9K
Q031 2SC1740S
C031 68P
R032 10K
R033 2.7K
R034 4.7K
C032 470P
D031 MA152WK
R171 2.7K
R172 2.7K
C171 0.01 μF
R271 2.7K
R272 2.7K
C271 0.01 μF
+12V
R048 1.2K
C042 0.1 μF
D042 MA165
R049 10K
+12V
BALANCE-R
BALANCE-G
BALANCE-B
CUT-OFF-G
CUT-OFF-R
CUT-OFF-B
12VS
VD CUT1
L7081 5.6 μH
CO-55N
1 2 3
ABL GND NC
TO H-Board
CO-06N
1 2 3 4 5 6
BLK GND +12V GND +12VS GND
TO A-Board

Modified

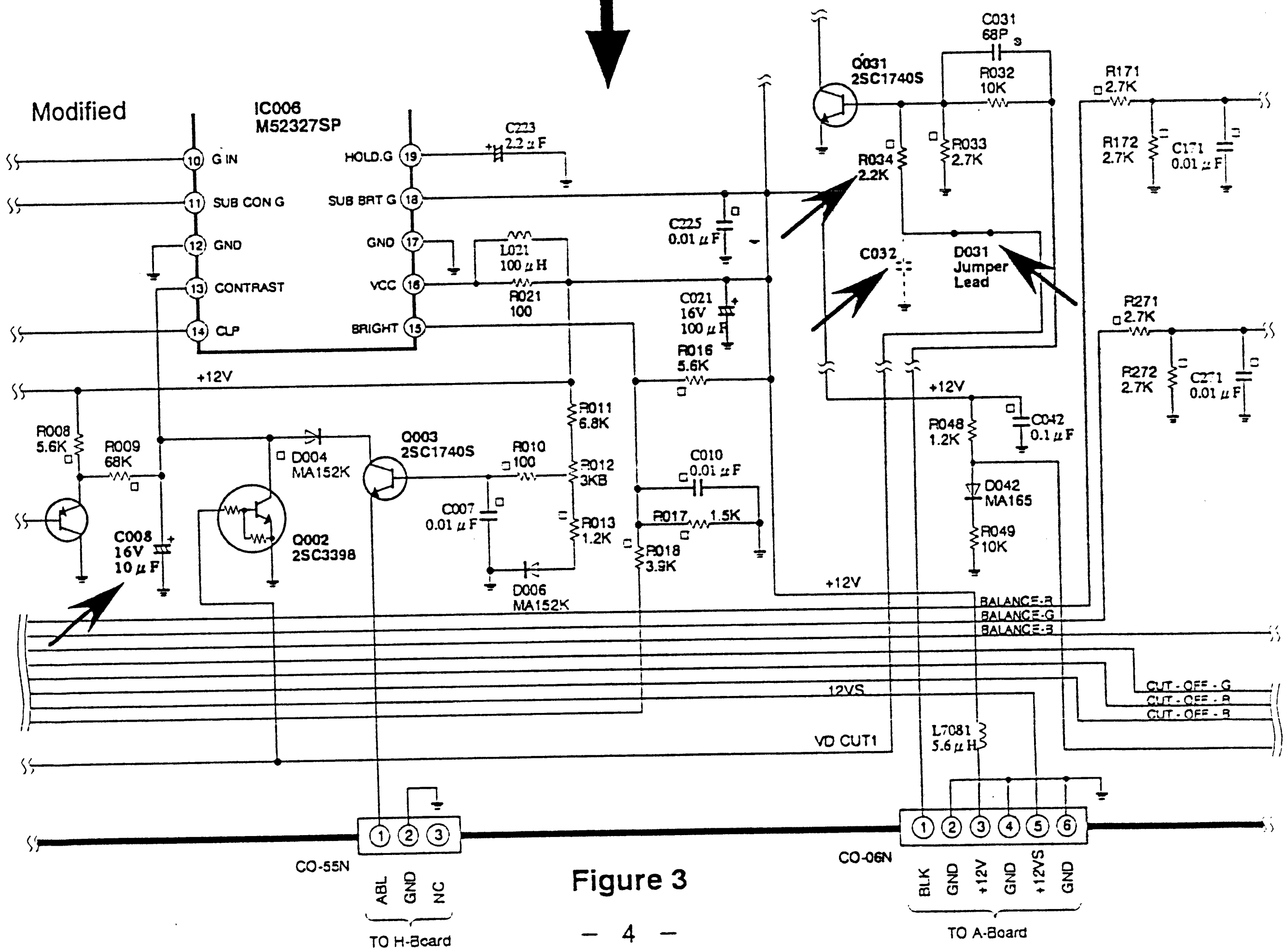

IC006
M52327SP
10 G IN
11 SUB CON G
12 GND
13 CONTRAST
14 CLP
HOLD.G 19
SUB BRT G 18
GND 17
VCC 16
BRIGHT 15
C223 2.2 μF
C225 0.01 μF
L021 100 μH
R021 100
C021 16V 100 μF
R016 5.6K
+12V
R008 5.6K
R009 68K
C008 16V 10 μF
D004 MA152K
Q002 2SC3398
Q003 2SC1740S
R010 100
C007 0.01 μF
R011 6.8K
R012 3KB
R013 1.2K
D006 MA152K
C010 0.01 μF
R017 1.5K
R018 3.9K
Q031 2SC1740S
C031 68P
R032 10K
R033 2.7K
R034 2.2K
C032
D031 Jumper Lead
R171 2.7K
R172 2.7K
C171 0.01 μF
R271 2.7K
R272 2.7K
C271 0.01 μF
+12V
R048 1.2K
C042 0.1 μF
D042 MA165
R049 10K
+12V
BALANCE-R
BALANCE-G
BALANCE-B
CUT-OFF-G
CUT-OFF-R
CUT-OFF-B
12VS
VD CUT1
L7081 5.6 μH
CO-55N
1 2 3
ABL GND NC
TO H-Board
CO-06N
1 2 3 4 5 6
BLK GND +12V GND +12VS GND
TO A-Board

Figure 3

MODIFICATION OF SCHEMATIC DIAGRAM
(On page 49 of Original **29GA Service Manual**)

X-Board

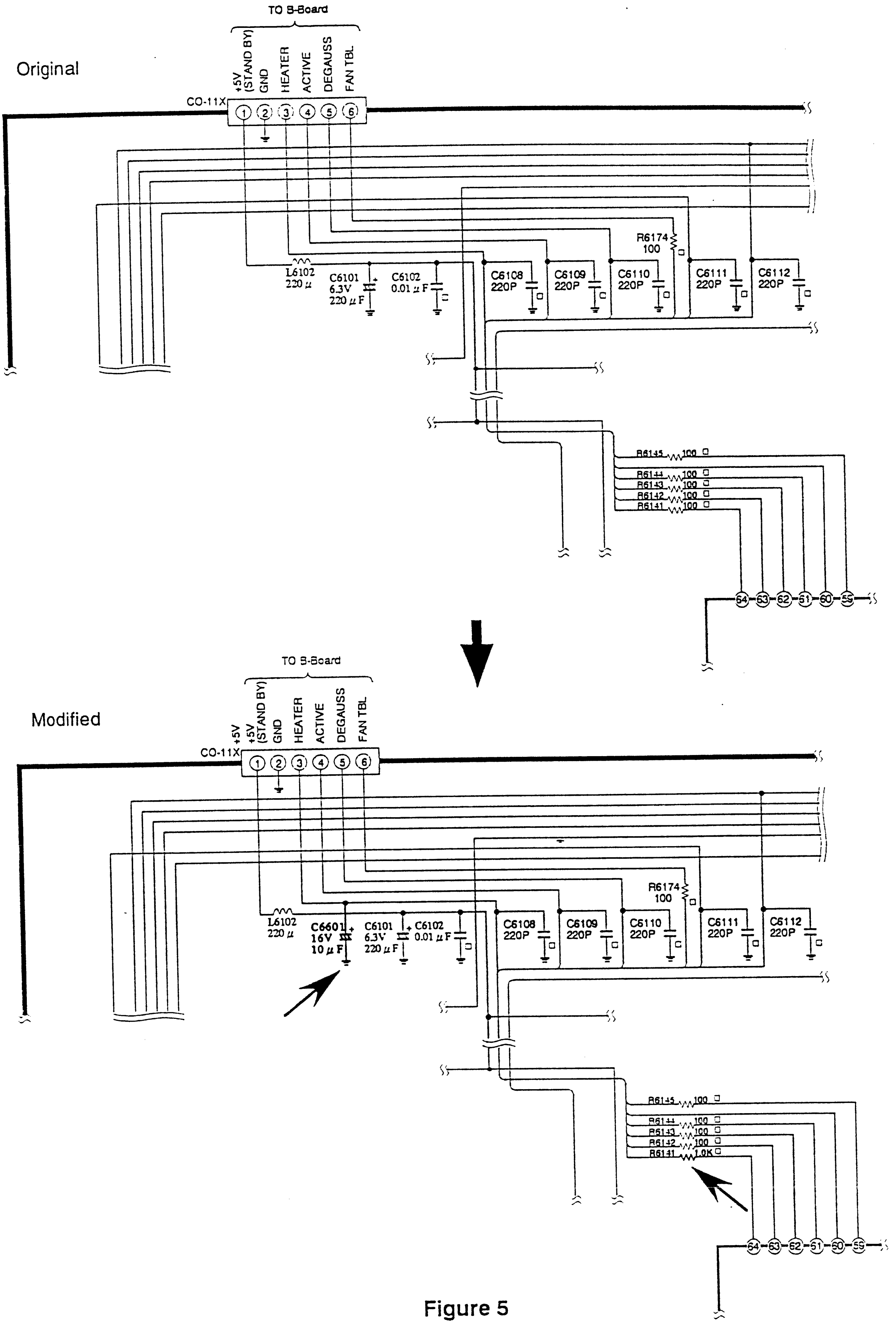

Original
TO B-Board
+5V (STAND BY)
GND
HEATER
ACTIVE
DEGAUSS
FAN TBL
CO-11X
R6174 100
L6102 220µ
C6101 6.3V 220µF
C6102 0.01µF
C6108 220P
C6109 220P
C6110 220P
C6111 220P
C6112 220P
R6145 100
R6144 100
R6143 100
R6142 100
R6141 100
64
63
62
61
60
59
Modified
TO B-Board
+5V
+5V (STAND BY)
GND
HEATER
ACTIVE
DEGAUSS
FAN TBL
CO-11X
R6174 100
L6102 220µ
C6601 16V 10µF
C6101 6.3V 220µF
C6102 0.01µF
C6108 220P
C6109 220P
C6110 220P
C6111 220P
C6112 220P
R6145 100
R6144 100
R6143 100
R6142 100
R6141 1.0K
64
63
62
61
60
59

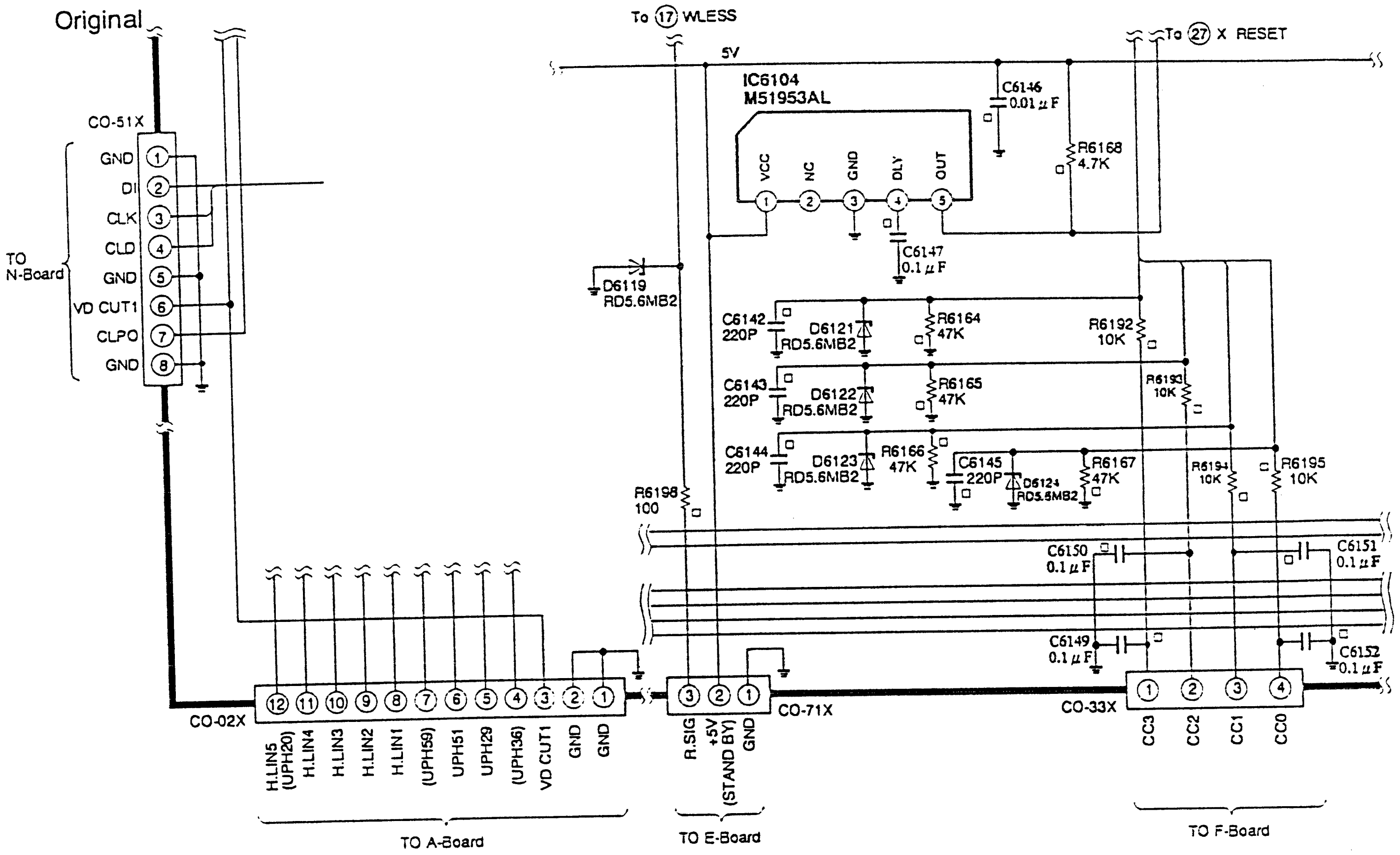
Figure 5

Printed in Japan
K9602 YA

■ MODIFICATION OF SCHEMATIC DIAGRAM
(On page 49 of Original **29GA Service Manual**)

X-Board

Original


To ⑰ WLESS
5V
To ㉗ X RESET
IC6104
M51953AL
VCC
NC
GND
DLY
OUT
C6146
0.01 μF
R6168
4.7K
C6147
0.1 μF
D6119
RD5.6MB2
C6142
220P
D6121
RD5.6MB2
R6164
47K
R6192
10K
C6143
220P
D6122
RD5.6MB2
R6165
47K
R6193
10K
C6144
220P
D6123
RD5.6MB2
R6166
47K
C6145
220P
D6124
RD5.6MB2
R6167
47K
R6194
10K
R6195
10K
R6198
100
C6150
0.1 μF
C6151
0.1 μF
C6149
0.1 μF
C6152
0.1 μF
CO-51X
GND ①
DI ②
CLK ③
CLD ④
GND ⑤
VD CUT1 ⑥
CLPO ⑦
GND ⑧
TO N-Board
CO-02X
⑫ ⑪ ⑩ ⑨ ⑧ ⑦ ⑥ ⑤ ④ ③ ② ①
H.LIN5 (UPH20)
H.LIN4
H.LIN3
H.LIN2
H.LIN1
(UPH59)
UPH51
UPH29
(UPH36)
VD CUT1
GND
GND
TO A-Board
CO-71X
③ ② ①
R.SIG
+5V (STAND BY)
GND
TO E-Board
CO-33X
① ② ③ ④
CC3
CC2
CC1
CC0
TO F-Board

Modified

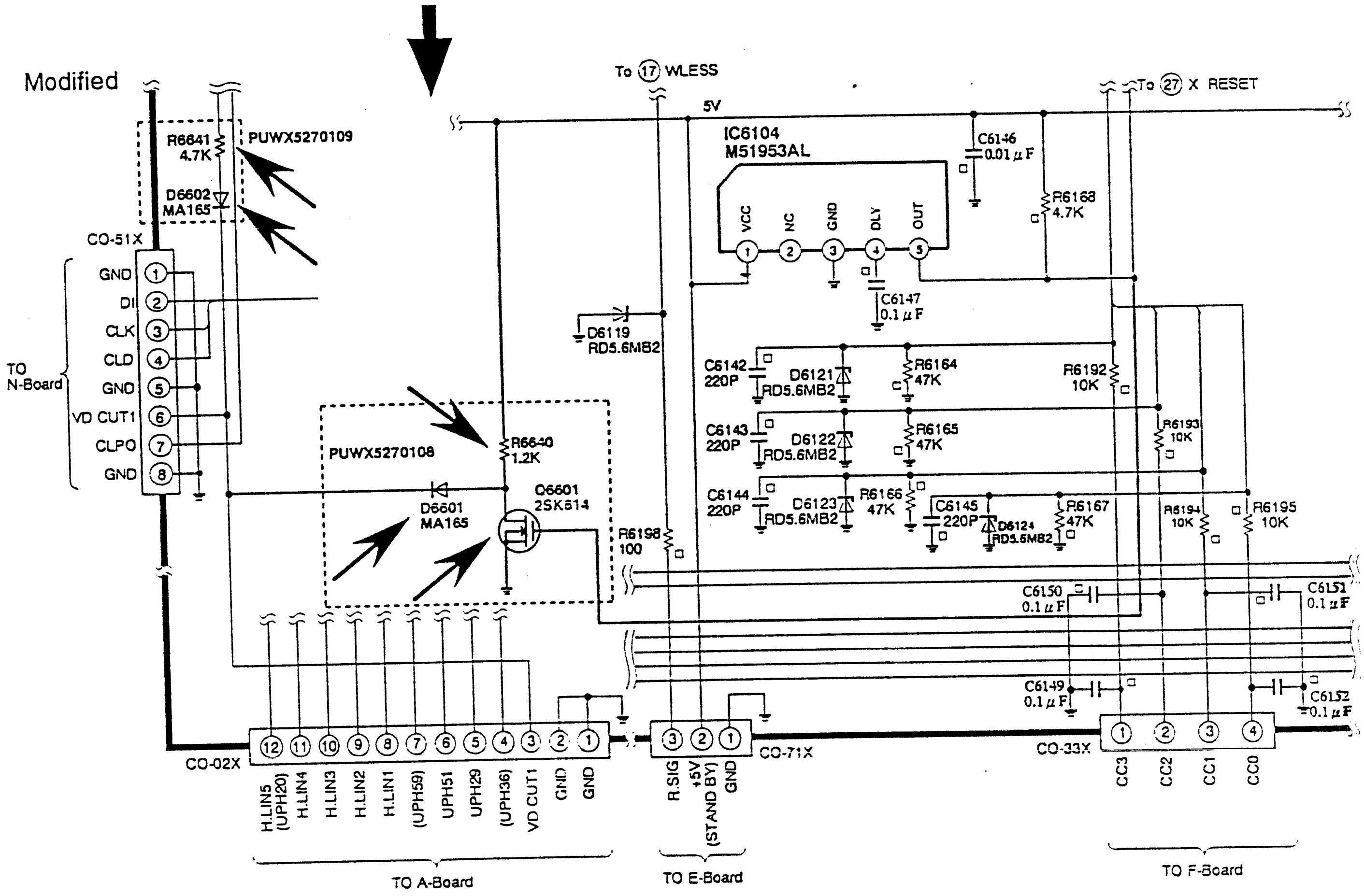

To ⑰ WLESS
5V
To ㉗ X RESET
R6641
4.7K
D6602
MA165
PUWX5270109
PUWX5270108
R6640
1.2K
D6601
MA165
Q6601
2SK514
IC6104
M51953AL
VCC
NC
GND
DLY
OUT
C6146
0.01 μF
R6168
4.7K
C6147
0.1 μF
D6119
RD5.6MB2
C6142
220P
D6121
RD5.6MB2
R6164
47K
R6192
10K
C6143
220P
D6122
RD5.6MB2
R6165
47K
R6193
10K
C6144
220P
D6123
RD5.6MB2
R6166
47K
C6145
220P
D6124
RD5.6MB2
R6167
47K
R6194
10K
R6195
10K
R6198
100
C6150
0.1 μF
C6151
0.1 μF
C6149
0.1 μF
C6152
0.1 μF
CO-51X
GND ①
DI ②
CLK ③
CLD ④
GND ⑤
VD CUT1 ⑥
CLPO ⑦
GND ⑧
TO N-Board
CO-02X
⑫ ⑪ ⑩ ⑨ ⑧ ⑦ ⑥ ⑤ ④ ③ ② ①
H.LIN5 (UPH20)
H.LIN4
H.LIN3
H.LIN2
H.LIN1
(UPH59)
UPH51
UPH29
(UPH36)
VD CUT1
GND
GND
TO A-Board
CO-71X
③ ② ①
R.SIG
+5V (STAND BY)
GND
TO E-Board
CO-33X
① ② ③ ④
CC3
CC2
CC1
CC0
TO F-Board

Figure 4